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Guidebook for facilitators in the cybersetting

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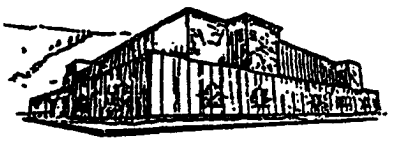

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A GUIDEBOOK FOR FACILITATORS IN THE CYBERSETTING

By

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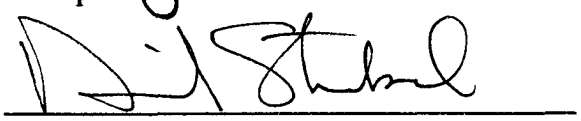

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A guidebook for facilitation in the cybersetting

Director: Dr. George Cheney 

ABSTRACT

Technologies that allow us to collaborate via the Internet are getting more common. One reason for this development is that today's technologies allow interactions that are similar to real-life experiences. For example, utilizing technologies, people can see each other, talk, and use groupware tools. This way, a "meeting" in cyberspace can feel much like a traditional face-to-face meeting. Facilitators that work to enhance peoples' use of collaborative technologies, groupware technologies in particular, is one group of upcoming professionals. The activity of computer-supported facilitation is the focus of this guidebook.

It is tempting to think that we know little about how to facilitate meetings in the cybersetting. Popular business literature tends to emphasize a lack of knowledge. However, this is an assumption worthy of consideration. The most important contribution of this guidebook is the synthesis of findings we already know because vast amounts of solid computer-mediated communication (CMC) literature and other relevant literature exist. Another important contribution of this guidebook is the linking of literature, as little CMC literature has been linked with the activity of facilitation. Furthermore, this guidebook covers literature that it can be very hard to obtain. CMC literature is found in a wide range of scattered journals and books that are hardly available to any member of one discipline. Lastly, a definition of the role of the facilitator in the cybersetting is suggested. Facilitators must not only have throughout knowledge about communication processes, they must also encompass solid understanding of use of technologies in organizations and pitfalls of technological innovation, as well as how to link the best of group processes with the best of technologies.

Roughly three areas of literature are covered. These areas include research that address: new organizational forms, social uses of technologies and technological innovations, and differences with the communication process during CMC meetings as compared to face-to-face meetings. Aside from presenting literature, specific recommendations for communication behaviors for facilitators are offered. The "boxes" throughout the guidebook represent summarized key findings, recommended readings, and other relevant information, such as case studies.

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People whom I have never met have offered their assistance. Many are well-known researchers in the field of CMC research. Your advice in the process of collecting literature has been invaluable. Our cooperation is proof to me that it is possible to do

work via CMC technologies. I'd like to thank: Noshir Contractor, Janet Fulk, Michelle Jackson, Ron Rice, Scott Poole, and Mark Aakhus. My special thanks to Ron Rice and Mark Aakhus for reading my work and offering advice.

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PREFACE

Internet collaboration will get increasingly more common. Microsoft, for example, has launched their next development. It is called ".NET." They are seeking to develop software that will make it easier for people to utilize the Internet at all levels - work, shopping, chats, etc. They have allotted about two billion dollars to this development. What will come of this is unclear. However, when the huge corporations are launching such ideas it speaks of the trends in the industry. IBM and other giants have similar strategies. For example, "having the Internet in your pocket" in the form of a pocket PCs speaks of a transformation of the way we do things. One way such technologies represent a change is that they allow to be available for "conversations" via the Internet -- virtually at all times and in most places.

It is clear from research on technology and communication that people do not change the way they live and work without going through some painstaking change processes. In this guidebook, I use a variety of research to answer the question of why technological innovations are sometimes successful and other times not. Such innovations seem to be more difficult the more the technology substitute traditional ways of communicating, such as "meetings" in cyberspace do. Part of the answer of why this is hard is that the "implementation" of such technologies is a continuous process that does not end at the entry of the technology in the organization. For example, users change the technology through use. At the same time, the organization the technology is used in changes as well. These changes can make aspects of the technology that was thought to be very important less important. It also seems to be crucial to pay close attention to the

actual use of a technology. Developing the best uses take time. It will most likely not happen unless a professional that knows the technology well works with the users.

It is a need for communication professionals to take part in the process of ensuring effective uses of Internetbased technologies. Facilitators that seek to enhance peoples' experiences utilizing collaborative technologies, such as groupware, is one upcoming group of professionals that will work to help people utilize Internet technologies. This is the focus of this guidebook. Groupware and other Internet technologies have one important thing in common: They change the way we communicate in the workplace because communicating via the technology substitute more traditional ways of communicating. For example, via groupware a group can simultaneously work on the same document via the Internet, in place of working on separate files. It simply does not seem feasible to ensure successful technological innovation of groupware and other meeting technologies without the help of professionals that know human communication well, because upcoming technologies require us to alter the way we communicate. The development we see today of moving activities to the Internet represents a huge change in the way we interact. It is a much more profound change then what we saw when productivity tools replaced specific functions, e.g. databases helped us organize and store information more easily. These professionals must be able to join knowledge about human communication with knowledge of technologies to ensure the development of a linkage that works. It is also clear from research that people who work with innovation of technologies should be sensitive to organizational dynamics. After all, the intended function of communication technologies is to support these dynamics. This guidebook offers insight to important areas that facilitators practicing in a virtual setting should be

aware of. Relevant research of organizational studies, use of technologies, and aspects of technologies are covered. Practical tips and recommended readings are offered throughout this guidebook.

CHAPTER ONE
INTRODUCTION

This first chapter serves as an introduction to the guidebook. I start with explaining my perspective on cybermeetings and facilitation in the cybersetting. It is important that the reader has a clear understanding of my perspective because it has guided the development of this guidebook. Briefly, I suggest that facilitators practicing in the cybersetting must have knowledge of technologies and how to wisely use them as well as having knowledge of facilitation and human communication. From this perspective, the job of the facilitator goes well beyond knowing how to use the tool. For example, the facilitator must encompass a solid understanding of the organizational environment the technology will support and seek to find ways of utilizing the technology that fit the particular environment. Next, I offer a preview of key points in the guidebook. Lastly, I explain how to best read this guidebook. I begin by addressing our need to learn about how to best run cybermeetings, because these meetings are coming.

The cybermeeting – new possibilities

Computer-mediated communication (CMC) technologies, such as groupware and e-mail, enable us to "meet" in cyberspace. *Participants can "attend" a cybermeeting from remote locations and, if desired, at different times.* Such meetings can occur when a traditional meeting cannot for practical reasons, e.g. it would be impossible for participants to meet at the same place on short notice. As technologies advance such meetings become increasingly commonplace, in part because new technologies allow for a meeting experience that does not feel like "an electronic meeting." Integrated media, for example, allow meeting participants to both see and talk to each other and at the same

time utilize electronic meeting tools that structure meeting activities. And of course, the idea of attending a meeting without leaving the office is appealing to many. For these reasons, and many others, collaboration via technologies is seen as the new competitive edge in today's business world. *The cybermeeting represents new ways of collaborating. The cybermeeting is coming; for that reason alone we should learn to best run such meetings.* One way of ensuring success when running cybermeetings is to utilize facilitation techniques, because these techniques have proven successful when running meetings.

Traditional facilitation and facilitation in the cybersetting

Communication professionals who run meetings are called *facilitators.* A facilitator helps people collaborate. To do this the facilitator must ensure that the process of the meeting is smooth (see Chapter Two). While traditional facilitation is a field that has become fairly established over the past 20 years, computer-supported facilitation (CSF) is a more recent innovation. *What computer-supported facilitators do is not well understood. It is an emerging practice that is developing standards.* This growing group of facilitators is a response to the need for professionals that can run meetings in new communication spaces; that is, primarily groupware tools, but also other CMC tools (Aakhus, 1997).

Through my work I've developed a particular point of view regarding what facilitators in the cybersetting should be and what communication behaviors they should enact -- Many of these perspectives are shared in this training guidebook. I'd like to take a few moments to clarify this position to the reader, because it has affected the making of this guidebook. To begin, such facilitators must know what facilitation is and have

knowledge of human communication. *The responsibilities of a facilitator in the cybersetting, however, go well beyond knowing how to simply facilitate. They must know a great deal about the actual technologies and how to wisely utilize these to the benefit of the group; the cyberfacilitator seeks to combine the best of group processes with the best of technologies.* To reach this goal, it is necessary to be aware of how people learn to use technologies and what affects use of them. As for all facilitation, the cyberfacilitator seeks to help people collaborate and thus improve communication. *In order to improve communication via technologies, facilitators in the cybersetting should act as "technology-mediators"-- meaning that such facilitators guide users in sound uses that promote effective utilization of technologies.* I now turn to present the key points of this guidebook, which will all be elaborated in their respective sections. First, I will explain what literature is covered, then I will provide an overview of the chapters.

Preview and key points

It is tempting to think that we know very little of how to facilitate meetings in the cybersetting. This perhaps is a common assumption because popular business literature tends to promote CMC interaction as a something we have little knowledge of. Through my research I have learned that this is an assumption worthy of consideration. *The most important contribution of my work is the synthesis of various findings we already know, because vast amounts of CMC literature and other relevant literature exist.* It "appears in such a wide range of scattered (and often new) journals and books in numerous disciplines (see Rice and Boan, 1985), and thus remains largely unknown to members of any one discipline" (Rice, 1992, p. 131). Although CMC literature is more accessible today in terms of journals and authors that are more established, it is hard to obtain all

relevant literature that can shed light to one question. It is even more difficult for a newcomer. I believe that no facilitator in the cybersetting, whom most likely work in a hectic environment, would have had the time to aggregate of the knowledge that is presented in this guidebook.

Overview of literature

Because the research on CMC communication is published in a wide range of works, it is daunting to explain what literature is covered in this guidebook. The simple answer is that I cover the literature I believe is useful for facilitators. Much of this literature has not been linked with facilitation before (see Appendix). *Because the facilitator's job is to take care of communication and group processes as well as combine these processes by use of technologies, the works covered must represent knowledge about these areas*. In other words, studies presented here help us understand human communication and technology in today's organizations. I have focused on knowledge that will help facilitators promote productive uses.

I collected literature for over one year for this guidebook. To develop my perspective and to ensure that the best works are covered, I corresponded with several scholars in the field, including Ron Rice and Mark Aakhus at Rutgers University. Other well-known researchers that have generously shared their knowledge with me include Noshir Contractor, Janet Fulk, Ron Rice, Scott Poole, and Michelle Jackson. Their advice has been invaluable in the process of collecting literature. My hope is that my collection of relevant literature, insights, and application of findings will help others have "Ah-ha!" experiences. For example that the concepts of technology-mediation and

socialization can be used to better understand facilitation in the cybersetting (see Chapter Five).

Roughly three areas of academic literature are covered. These areas include -- new organizational forms, social uses of technologies, and research that address differences with the communication process via CMC media. All of them are relevant to scholars within organizational communication, a part of the communication studies discipline. I will briefly explain these areas. First, new perspectives on organizational forms and technology have been developed during the 90's. This development has been dramatic. Fulk and Steinfeldt's key volume from 1990, *Communication and Organization*, represent a collection of excellent research that links knowledge of human communication with that of organizational forms. *Throughout the works are focused on uses of CMC media and the ways this affect communication and organization.* These works were followed-up by Fulk and DeSantic's book, *Shaping organization form: communication, connection, & community*, from 1999. Highlights of the above and related research are presented this guidebook. It is essential for the reader to have insight to these works because knowledge of them help facilitators to better understand the way organizations work today and the environment they provide for employees (see Chapter Three).

Second, a related area is the use of technology in organizations. This perspective was developed in the 80's, following the late 70's realization that technologies are social creations. Ron Rice is a key figure in this area. His books, *The New Media* and *Managing Organizational Innovation*, from 1984 and 1987 respectively, represent milestones. These works, however, are only the tip of the ice-berg. Vast amounts of

research on social uses have been conducted by many other researchers, including Janet Fulk and Gerdiane DeSantis. Furthermore, MIT's Orlikowski has developed an interesting perspective on social uses -- the technology-mediation perspective (see Chapter Four and Five). *To have knowledge of social uses of technologies is helpful for the facilitator because it helps clarify what affects the uses of technologies and how we learn to use them.* These insights also help us understand the parts of organizations that are particularly important in a technology's post-implementation stages. (For example, the importance of the management' support of use and experimentation with new technologies).

Lastly, vast amounts of empirically grounded research have been conducted on how to best utilize groupware and other CMC media. Much of this research help us understand how the communication process is different in the cybersetting as compared to the traditional setting. *Clearly, this is an important area for the facilitator to gain insight to, so that she can best help the group adapt to the changes.* In the beginning of this guidebook, I provide a brief overview of facilitation. The intent of this chapter is primarely to explain what I mean when using the term "traditional facilitation."

Preview of chapters

The following is a summary of the chapters in this guidebook. I t is divided into different parts that correspond with the areas of literature that are covered in each part. These parts include: "*Introduction and background*", "*Social uses of technologies*," and "A different communication process."

Chapter Two: Traditional facilitation and facilitation in the cybersetting, the first chapter in the Introduction and background part, serves as an introduction to the

fundamentals of traditional facilitation. It is important that the reader has a clear idea of what traditional facilitation entails in order to effectively utilize such skills in the cybersetting. I offer some ideas for how traditional facilitation techniques can be applied in the cybersetting. More ideas for how traditional facilitation skills can be applied in the cybersetting are sprinkled throughout the guidebook. Additionally, Chapter Six and Seven include several guidelines for how to apply traditional facilitation skills.

In *Chapter Three: New organizational forms: the networked and virtual organization,* I offer an introduction and some insights of organizations as loosely-coupled networks. *The "networked" and "virtual" organizational forms are covered.* Important lessons from research on new organizational forms are discussed. One important lesson is that relationships between people are increasingly mediated via technologies, depending on the degree to which organizations are "wired". These relationships are an important part of the structure of the organization. *Facilitators in the cybersetting must keep in mind that the way they facilitate, particularly when advising on use of technologies, will have a great impact on how people build relationships via technologies, and in turn possibly affect the structure of the entire organization.* It is important that facilitators have knowledge of how network theories can help us understand the communication in wired organizations. Recommendations for how to utilize the network perspective to understand communication in networked organizations are included.

Like Chapter Three, the first chapter on social uses of technologies, *Chapter Four: Technologies as social phenomena and the reinvention of technologies,* serves to create a framework for thinking about communication via technologies in organizations.

First, I explain how we started to see technologies as social creations as opposed to neutral tools. *Understanding technologies as social creations means that technologies are seen as a contextualized part of our surroundings -- it is an interplay between the user and the technology that is shaped by the context surrounding them.* Important findings from this research are linked with the activity of facilitation. For example, it is pertinent for the cyberfacilitatior to know that people "re-create" technologies through use. In other words, technologies may be used the way they were intended and they may not. Facilitators in the cybersetting should have knowledge of this process, often referred to as the reinvention of technologies. This process provides a powerful explanation for why technologies are not always productive because it becomes more clear what it takes to ensure productive uses.

In the second chapter on social uses of technologies, *Chapter Five: The facilitator as a guide for others' uses of technologies,* I explain how peoples' uses of technologies are influenced by their interaction with other people in the particular environment they operate in. *In other words, the way people use technologies is greatly influenced by how they learn to use them from others they interact with in the workplace.* This is perhaps the most pertinent finding of CMC research for facilitators in the cybersetting. Researchers have found that we pick of ways of using technologies from people we work with, most likely the "technology champions." If there are no such people, we might pick up poor practices from less proficient users. This discovery is extremely important to facilitators in the cybersetting, because the cyberfacilitator is a champion of technology. Facilitators must be aware of this dynamic. *To be successful, the cyberfacilitator must act as guide and intervene with the way people use of technologies to promote sound*

ways of utilizing them, or the technology may not be effective. One study in particular is explained in depth. This is a study that focuses on a group of people that successfully guided the use of many other groups. I also explain how theories of socialization help us better understand the facilitator as a guide for promoting sound uses.

The facilitator must have knowledge of differences between the communication-process in a traditional meeting and that of a cybersetting. These differences have been devoted much attention in the literature. In *Chapter Six: The process of running cybermeetings as compared to a traditional meeting,* the most pertinent differences are discussed. Many of these differences, such as the possibility for more than one person to talk at one time via meeting technologies, change the communication process. *Because the communication process changes when a groupware technology is used. the facilitator must judge whether it is to the benefit of the group.* In this chapter, I offer advice on how to take advantage of the changes.

The most important difference, however, is that there is less opportunity for face-to-face communication in the cybersetting. This is discussed in *Chapter Seven: The question of whether social cues are transferred via CMC media and some ways to overcome the challenge of fewer social cues.* Limited possibilities for face-to-face communication is a challenge for the facilitator because it is harder to interpret non-verbal body language and other social cues. However, as I will argue, there are ways of overcoming this obstacle. One way of doing this is to increase the facilitator's social presence in the setting. There are many ways the facilitator can do this, for example by reading comments from participants and looking for comments that are rude or otherwise out of line. When the facilitator sees such comments, she should act on them just as she

would in a traditional setting. Interestingly, researchers have recently suggested that social cues are transferred via CMC media. This is good news for facilitators because they often need to interpret social cues to do a good job.

Lastly, I discuss implications of the understandings from research that have been covered in this guidebook. *I start with defining the role of the facilitator.* Based on the wide range of research that has been addressed in this guidebook, I suggest that the facilitator must be sensitive to human communication. However, the facilitator must also have solid knowledge of how to wisely utilize technologies. To do this, the facilitator must have knowledge about many areas, such as organizational conditions for use. *Second, I underscore the importance of the post-implementation stages of technologies.* Many of the findings presented in this guidebook illustrate that technological innovations are at risk of failure if post-implementation stages are not taken seriously. It is essential to have someone to guide this process in order to ensure success. The facilitator is one person that can guide work with the users after the technology is implemented. I will now offers some tips for how this guidebook best can be approached.

How to read this guidebook

Each chapter consists of three parts. The first part is the chapter itself. This is written in essay style. After each section in the chapters I summarize key findings in "bulleted" lists. This way, the reader can use the summaries as a handbook. Thus, the reader can choose to read the whole essay to get a more in depth perspective or simply look at the summaries. When reading an essay, the reader should try to read it in one setting. I have attempted to write each essay so that it can be read by itself, however, the chapters build on each other. For example, Chapter Five will most likely not be well

understood if the reader did not read Chapter Four. This is because the reader must grasp the basics is social uses of technologies first. Chapters Three, Four, and Five and build largely on theory. My hope is that the reader will interpret the last two chapters, and future readings, keeping in mind the framework for thinking the more theoretical chapters provide (Chapters Two, Three, Four, and Five). The reader should not expect to be able to follow an essay unless she starts reading it from the beginning.

Second, text-boxes with additional information are included where they fit throughout the guidebook. These boxes include examples from the literature and companies, in-depth discussion of a study, and summaries. Note that the boxes always offer further treatment of the topic that is discussed in the particular section it belongs to. In short, whatever is appropriate to offer more in-depth treatment of an issue is included in the boxes. Readers with special interest in an issue will find these boxes very helpful. Third, each chapter ends with a recommended reading section. The most important studies that pertain to the topic of each chapter are provided. I briefly explain each reading in order to help the reader determine whether this is a reading she would like to obtain. My hope is that these recommendations will save the reader some time.

The reader should note that this guidebook is not completely comprehensive. Rather its intention is to serve as an introduction to important literature that shed light ton facilitation in the cybersetting. However, I have tried to be fairly comprehensive and up-to-date. As I write this, researchers are working to better understand communication in the cybersetting. I encourage the reader to obtain research from some of the authors I recommend in this guidebook. The recommended reading sections should help the reader with this. As I explained above, I have worked very hard to find the best of research on

communication and use of technologies. The reader should note that I have communicated with the best of researchers in the field to obtain the latest literature as well as to get advice as to what the "best" readings are. I feel confident that the most important works are discussed or a reference is provided.

What is groupware?

The term groupware can be confusing because the term has many names and uses in the literature.

For example, Group Support System (GSS), Group Decision Support System (GDSS), Electronic Meeting System (EMS), Computer Supported Cooperative Work (CSCW), computer conferencing, collaborative computing, work group computing, and computer-mediated communication (CMC), to name a few, can all mean groupware (Markhus, 1997, p.22).

A safe way to know whether software is really groupware is to ask -- "is this software used to support groups." For the purposes of this guidebook, a software is seen as groupware if it it's intended use is to enhance collaboration and a group's work.

What is a meeting in the cybersetting?

A meeting in the cybersetting can be a mix of the following: face-to-face, same location, distributed (at different locations), same time (real-time), and not real-time. The cybersetting thus extends the notion of what a meeting is. Some might not agree and argue that meeting at distributed meeting that is not real time is not a meeting (Ventana, Group Systems Manual, 1998).

During a typical cybermeeting, Personal Computers (PCs) are linked together in a network and are loaded with the software for Electronic Meetings. These PCs are for entering opinions, facts, suggestions or votes and are in use for typically 30 -50% of the meeting. They assist in the communication process but do not reduce meetings to silence - there can be plenty of discussion and conversation (Weatherall & Nunamaker, 1995). Participants may attend the meeting from different locations via their PCs.

Recommended readings on cybermeetings and groupware

Academic works

There are not many works within communication studies discipline on facilitation via groupware. Notable exceptions are:

Aakhus, M.J. (1997). The communication logistics of computer-supported facultative interventions: A study of the community of practice and social technologies surrounding the use of group decision support system in process facilitation, Dissertation, Department of Communication – The University of Arizona.

Fulk, J. & Collins-Jarvis, L. (in press). Wired meetings: Technological mediation of organizational gatherings. In F. Jablin & L. Putnam (Eds.),*New handbook of organizational communication.* Newbury Park: Sage.

This research is highly sophisticated and the content can be hard to grasp for newcomers. Markhus's dissertation offers good insight into concepts such as groupware, computer-supported facilitation and decision making technologies. His investigation shows that technical advances can enhance decision-making and he demonstrates that it cannot be assumed that content and process are distinct. Fulk's and Collins-Jarvis article is a through summary of research on wired meetings.

Popular works on cybermeetings

Weatherall, A. & Nunamaker, J. (1995). Introduction to Electronic Meetings see Ch. 1, available free at www.groupsystems.com (in the knowledge library).

A great introduction to what an electronic meeting might look like.

Creighton & Adams. (1998). CyberMeeting: how to link people and technology in your organization, New York: Amacom.

Creigton and Adams offer many good insights. The argue that human relationships come before the technology. The book has lists with key-points and advice, many are useful for facilitators in the cybersetting.

Kostner, J. (1996). Virtual leadership: secrets from the round-table for the multi-site manager, New York: Warner Books.

Kostner's book emphasizes that we should use what we know about leadership in the cybersetting. Trust, for example, is as important, if not more important, in distributed settings as in face-to-face settings.

CHAPTER TWO
INTRODUCTION TO THE ACTIVITY OF FACILITATION

> Tip 1: All good traditional facilitation skills and techniques apply [in the cybersetting]. The role of the facilitator remains an important part of a well-run meeting and our skills in planning agendas, creating the appropriate group environment, encouraging participation, and leading the group to reach its objectives are all equally valuable and important to meetings that happen to use technology.
> (Facilitation Tips, 1999, author unknown)

In this chapter I first describe the fundamentals of traditional facilitation. I then offer some ideas for how traditional facilitation can be applied in the cybersetting. *An introduction to traditional facilitation is included because it's important that the reader have a clear idea of what facilitation entails in order to effectively utilize such skills in the cybersetting.* I also want to make it obvious to the reader what I mean when I use the term traditional facilitation. Several readings on traditional facilitation and resources are recommended at the end of the section. This chapter is by no means comprehensive. Rather, its intention is to serve as an introduction to facilitation and to provide a basis from which the reader can explore facilitation further if desired.

The facilitator's area of practice

There are many contexts that call for a facilitator. Before offering some contexts where facilitation is needed, I want to point out to the reader that it is a distinction between facilitation and conflict resolution. This is important because I want to make sure that the reader does not expect this guidebook to advise on how to best handle conflicts in groups by help of technologies. In short, facilitation entails helping all groups, whether they are in conflict or not. However, groups in serious conflict should seek the assistance of people that are specialists in conflict resolution rather than

facilitators. It is not uncommon that facilitators have expertise in conflict resolution as well, but it might not be the case.

One situation that typically calls for a facilitator is the open discussion. "Open discussion is the unstructured, conversational, familiar way of talking in groups" (Kraner, 1996, p.56). As Kraner points out, open discussion can be very effective, but in reality such discussions are often hard to sit through. Kraner lists many common problems with the open discussion: the conversation might meander or drift, a few individuals dominate, or people speak without linking ideas to those of others. Such discussions are rarely productive. To be more productive the group needs a facilitator that knows how to structure the discussion. To do this, the facilitator can, for example, help the group to focus the discussion and assist the group in establishing rules for who talks when.

The role of the traditional facilitator

It is appropriate to clarify the facilitator's role. *The facilitator is a servant of the group, a caretaker of the process, not an arbiter of the content.* The facilitator, thus, is relatively neutral and objective to issues discussed in the meeting (Webne-Berhrman, 1994). The facilitator should strive to not get too involved with the content of the meeting. This can be hard, but it is possible with practice. *It is assumed that groups have the best knowledge of the content, and thus should be responsible for it, whereas the facilitator is best suited to guide the group process.* The Center for Conflict Resolution summarize the facilitator's role: "A facilitator's job is to focus on how well a group of people work together" (Auvine, 1978, p.2). In other words: "The facilitators job is to support everyone to do their best thinking". To do this, the facilitator encourages full

participation, promotes mutual understanding, and cultivates shared responsibility (Kraner, 1996, p.32).

The facilitator puts to use many different activities and techniques. Typically the facilitator will ensure that an agenda is sent out prior to the meeting, get a meeting room, break the ice at the meeting, run discussions, categorize information, and help the group reach consensus. Additionally, it's crucial to ensure that the meeting notes are recorded for later use. This serves to retain the group's memory. As can be inferred from the above, a great deal of the facilitator's work is done outside of the meeting itself. For example, the facilitator often conducts interviews ahead of the meeting to know the "issues" of the group. The facilitator may also follow-up the group after the meeting to ensure that members actually carry out tasks. Because the facilitator is a caretaker of the process before, during, and after the meeting, the group can more easily focus on the task at hand. *Throughout this process, the facilitator will work hard to ensure that everybody participates and that what people contribute really is their best thinking.* The facilitator wants a collaborative effort from the group. It can seem as more work for group members to be required to collaborate. For example, discussions can be quite intense so the group might take more time to agree on a solution than they are used to. This can be seen an ineffective way of running a meeting by group members. However, when an agreement is reached through collaboration, it is most likely more sustainable because everyone participated in reaching the agreement. Overall, true collaboration means that all members of the group are responsible for the group's results and health, not only the leader. In the long run this is a benefit for the group, because people are more likely to work to implement a sustainable solution (see Kraner, 1996).

Summary: the facilitator's role

The facilitator:

- is relatively neutral to issues discussed in the meeting
- regulates the process of the meeting
- works with the group before, during, and after the meeting
- tries to enhance equal participation
- structures discussions

Facilitators strive to help groups work without their help

Keep in mind that the most important task you have as a facilitator is to help the group work productively *without* your help.

Do to do this, you must always think in terms of "How can I help this person understand that her communication behaviors is important for the well-being of the whole group?" or "How can I help this person move from seeing mostly problems in the group towards realizing that they themselves can turn a problem into a solution?"

As a general rule of thumb, as a facilitator you should seek to understand peoples' problems, but never allow people to avoid suggesting how the problem can be solved. For example, if a group member makes a complaint, you answer: "O.K., I understand that you are concerned about this. Now I want to challenge you to think about what you can do to solve this?" Such responses help people to think about what they can do. Some might say that this way, the facilitator is dealing somewhat with the content.

Group processes – the importance of a supportive climate

> Jim [the supervisor] had been expecting two important E-mail messages. Neither were there. *Trust.* Jim made three phonecalls to his telecommuter at home. Voice mail answered. Was he there or not? *Trust.* About thirty minutes into the audio meeting, Jim asked of a question of one of the Denver people. No response. How long were they not listening? *Trust.*
> (Kostner, 1996, p.43).

An important goal of taking care of the process is to help create a supportive climate in the group. The belief is that groups will do more productive work in supportive climates. *The facilitator will act on behaviors she observes during the meeting to improve the climate in the group.* For example, one person might try to

dominate the interaction in the group by interrupting other people when they talk. The person might say: "Yes! T hat's a great idea [name of person who was about to finish a statement], how about if we do it this way – let me explain really quick..." When this happens the facilitator will stop the "discussion" and remind the group that one person should talk at the time and that people should be able to finish a statement. In other words, the facilitator structures the discussion. Such dominant members should come as no surprise to the facilitator; the facilitator should know of these members in advance of the meeting having conducted pre-assessment interviews. *Overall, every step the facilitator takes during the meeting is a judgment call based on observed behaviors during the meeting as well as what was revealed in pre-assessment interviews ahead of the meeting.* Sometimes the steps are planned; other times the facilitator must change strategies on the spot.

Working to build trust in the group is important when a supportive climate is the goal. To build trust among members it is crucial to share information and ensure that participation is equal. As mentioned above, the facilitator believes that everyone in the group has valuable contributions and that groups work best when every onecontribute. The latter is a crucial value for the facilitator to act on when seeking to help group members cooperate and collaborate (Auvine, 1978). The facilitator encourages full participation -- for example, by using the go-around technique.

Traditional facilitation skills in the cybersetting

The term cybermeeting sounds very trendy and new. It is tempting to think that we do not know very much about such meetings. Fortunately we do, because the cyberfacilitator can apply many traditional facilitation skills to the newer "virtual

environment." I will now challenge the reader to think creatively of how cybermeetings can be facilitated based on our existing knowledge of facilitation. Keep in mind that *a limitation of the cybersetting is that it provides less opportunity for the facilitator to observe non-verbal body language, tone of voice, the context, and other social cues* (please see Chapter Six and Chapter Seven). First, however, I will list some common facilitation skills to further clarify what facilitation entails.

Common facilitation skills

- Paraphrase: repeat what meeting participants said in different words.
- Re-statements: restate what meeting participants said.
- Listening: listen attentively throughout the meeting.
- Drawing people out: work to help quiet people speak up.
- Balancing participation: ensure that all group members participate.
- Controlling the flow of a discussion: ensure that discussions are structured.
- Asking questions: ask questions that can help clarify a point of view
- Managing conflicts: help the group to deal with conflict.

(Fall Semester, 1999, Classnote, Facilitation class, Comm 495, The University of Montana, Communication Studies department, Instructor, Bill Willmot)

There any many ways in which traditional facilitation techniques can be utilized in the cybersetting. I will offer some examples inspired by Kostner's book on long-distance leadership (Kostner, 1996). First, traditional facilitation can assist groups in overcoming the "enemies" of geography and interpersonal distance. *As a salient example, I can mention that building trust is even more important in virtual teams, because the facilitator has few opportunities to exercise direct control over members in dispersed geographical settings.* Thus, she and the groupmembers must trust each other to do their jobs and having truthful intentions. Furthermore, *information sharing is as essential in building trust as is encouraging participation from group members.* It is important to keep in mind that informal information sharing does not take place as easily.

For example, group members do not meet at the water cooler. Because of this and because there are less informal and face-to-face communication in virtual environments, misunderstandings can occur. Sharing information is a great way to avoid misunderstandings. Third, people in distributed settings work in different realities, further adding to the possibility of misunderstandings. *Ensuring that people have the same information can prevent people from making faulty assumptions.* Lastly, people must feel included in the group. If not, collaborative work seems more like a nice vision than a reality for group members. Not including people is a sure way of lowering the overall level of participation, which is a great threat to collaboration (seeKostner, 1996).

Summary: creating a supportive climate in a distributed setting

- Trust is even more important in virtual teams, because the facilitator has few opportunities to exercise direct control over members
- Information sharing is as essential in building trust as is encouraging participation from group members
- Misunderstandings can easily occur. Sharing information is a great way to avoid misunderstandings.
- Distributed team members work different places, so it can be harder to "be on the same page". The facilitator should ensure that people have the same information to prevent people from making faulty assumptions.

Recommendation for communication behaviors that work to enhance information sharing

- **Share information and strive to include all group members in group activities.** By doing so, you demonstrate that decisions are not made without involvement from the whole group. This makes people care more about the group's work and it builds trust. Information overload problems can be an issue in distributed team. However, be careful with excluding people because you don't want to "bother them with the information." Allow people to make that decision themselves. You can ask if there are certain areas of the group's work members don't think that they need be informed about. Only when people answer yes to that question is it acceptable to exclude someone.

- **Keep in mind how you would act in the traditional setting and enact similar behaviors in the cybersetting.** It can often be beneficial to enact the same behaviors in the cybersetting as you would in the traditional setting. For example, would you send a memo that pertains to the group's work only to some of the participants? Would you have a discussion with only some group members and make decision? Probably not. Avoid enacting similar behaviors in the cybersetting. For example, send e-mails to the whole group. Also, ensure that everyone is invited to on-line group discussions and that they have a fair chance to attend.

Tips for how to help group with information sharing in the cybersetting

- Have a Web presence that informs members on progress in the group. Members can update these areas themselves or send them to you. Technically this is fairly easy to do. Most groupware includes features that can be used for this purpose, e.g. the group outliner tool in Group Systems. Office 2000 make it easy to post a document as a Web page. This provide another way of sharing documents.
- Ensure that everyone in the group is copied in e-mail programs and other communication tools the group uses. Help the group by sending them the e-mail distribution list to all members in the group and request that it is used each time they share information with each other (even when they think it may not be interesting for every one). It can be smart to do this regularly as people may loose things; e.g. files get deleted accidentally.

Remind the group members that you alone cannot take the responsibility for the group's health. Use every opportunity to help the group help themselves. For example, set clear deadlines for when work must be completed.

Recommended readings on traditional facilitation

These readings provide a good starting point for readers that want to learn more about traditional facilitation and how to run meetings.

Doyle, M. & Strauss, D. (1976). How to make meetings work New York: Jove Books.

This classic book offers great insights into how meetings can be run more effectively. The "interaction method" is presented. This method moves the responsibility of "saving" the group from one leader to the group as a whole and is proven to make many meetings more productive.

Auvine. (1978). A manual for group facilitators Center for conflict resolution, 1978

Chapter 1 & 3 clearly defines the values a facilitator should have and what a facilitator's responsibilities are. These chapters are a must to read for facilitators. I recommend reading them regularly to remind oneself of the values of the profession.

Kraner, S. (1996) Facilitators guide to participatory decision-making Canada: New society publishers.

Putz, G. (1998). Facilitation Skills: Helping Groups Make Decisions. Bountiful, UT: Deep Space Technology Co.

These works are full of practical tips and illustrations, many of which can be used as handouts. Helpful hints are offered to successfully run meeting activities. Brainstorming, categorization, voting, and many other activities are covered. If you don't know what the grunge phase and paraphrasing are – study these books!

Webne-Behrman, H. (1994). Guardian of the Process: A Handbook for Group Facilitators. Madison, WI: Collaborative Initiative Inc.

These articles clearly articulate the importance of not havinga say on the content as a facilitator.

Internet resources

These Webs sites provide tips and readings for facilitators in the cybersetting:

www.facilitate.com

www.technographer.com

www. groupsystems.com (click on the link to the knowledge library)

CHAPTER THREE
INTRODUCTION TO NEW ORGANIZATIONAL FORMS AND NETWORK THEORY

In this section I offer an introduction and some insights on organizations as loosely coupled networks. By doing so I describe aspects of the cybersetting in which facilitators interested in this manual most likely will work. *Understanding aspects of the cybersetting is useful for the facilitator because many organizations today can best be described as communication networks of human communication mediated via technologies.* It is, therefore, essential for the facilitator to have both conceptual and practical tools to better understand human communication processes in these organizational units consisting of communication networks. *It is pertinent for the facilitator to understand that the way people communicate and shape the networks of interaction is something that in turn shapes the organization.*

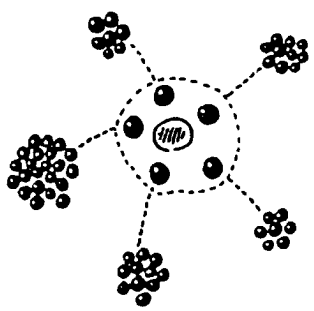
One perspective in particular, *the organization as a network perspective, helps us understand the communication in today's fluid organizations as well as how this communication give the organization its form.* It is useful to make a distinction between three types of networks (a) the networks that are internal to the organization (b) networks between organizations and departments, (c) networks that form emerging organizations. Because of these distinctions, *it makes more sense to think of networks as patterns of contact between people rather than a network with set boundaries.* Using the network perspective we can capture communication networks as they exist and not restrict ourselves to analysis inside the boundaries of the organization.

Networked organizations – organizations as communication networks

Communication networks are the patterns of contact between communication partners that are created by transmitting and exchanging messages through time and space.
(Monge & Contractor, 2001 p. 1)

Description of the networked organization

Before discussing electronic communication and the shaping of organizations in more detail, it is appropriate to describe the networked organization. Generally, networked organizations are seen as more fluid systems with fewer procedures and flatter structures than the more rigid bureaucracy. Networked organizations often consist of inter-organizational and inter-departmental teams and most likely these teams are put together to work on projects. There is a need for crossing organizational and departmental boundaries (if these at all exist) in order to accumulate the knowledge the various projects require. The communication among team-members in such project teams occur via electronic media to a large degree, for example because the teams might not work for the same organization and/or they work at different locations. The leadership is often small and works primarily to plan and coordinate the activities of the organization.



Model 6: The Loosely-coupled Organic Network

A model of the network organization from Morgan (1989, p.66)

The organizational network – a structure of relationship between people

It is useful to explain the notion of a network. *A network consists of nodes and links; the links between the nodes create a system or network.* The nodes in the network are people or groups. The links between the nodes are the communication channels that are available. It is via these links, or communication channels, that relationships between people are facilitated. Therefore, *through the lens of the network perspective we can focus on organizations as networks of relationships among people*, either as individuals or groups (see Contractor & Eisenberg, 1990). These relationships are mediated via technologies to varying degrees, depending upon what kind of communication channels are available. Overall, the network perspective allow us to focus on social aspects of technologies, which will be explained in the two upcoming chapters. For now it is sufficient to keep in mind that human interaction is a social behavior, whether the contact is mediated via technologies or via face-to-face contact.

It should be noted that the thought of looking at organizations as structures or networks of relationships is not new. This idea can be safely tracked back to Chester Barnard and his work in 1938. He said that *if you take everything else away from an organization you are left with a structure of relationships*. Communication scholars and many others have revisited and dramatically contributed to the network perspective during he past decade. This is not surprising considering the increase in the use of technologies. *This perspective allows us to understand electronic-mediated relationships as well as the networks such relationships are "clustered" in.* The perspective is also useful because it captures emergent communication processes such as interaction patterns

among people, as opposed to frozen structures, such as procedures, or attributes, such as characteristics of people.

Scholars within the field of organizational theory and communication have always had a keen interest in what shapes the form of organizations. That is, what elements actually give the organization its structure. For example, in the bureaucracy, procedures and their imbedded rules have been found to shape the form of the organization to a large degree. If one changes the procedures in a bureaucracy, the organization will most likely look and act differently. *Interestingly, network research indicates that use of technologies shapes organizations. In other words, the structure of electronic communication becomes the structure of the organization.* Therefore, network organizations are often described as networks of human-to-human computer interaction.

Key network analysis concepts

The typical network organization – some key characteristics:

- The organization is seen as a fluid system.
- The organization has few rules and procedures.
- The employees are often teams working on projects.
- The teams cross organizational and departmental boundaries, if these at all exist.
- Communication among employees often occur via CMC media.
- The leadership of the organization might consist of new people.
- The opposite of a typical network organization is the rigid bureaucracy

A network – some key characteristics:

- The network consists of nodes and links.
- The network is fluid and can easily change.
- The nodes can be people, teams or organizations, even societies.
- The links between the nodes create a system or network.
- The links between the nodes are communication channels, often CMC media.
- The networks can be seen as structures of relationships between people.

Overview of network perspective

Organizations are seen as connectedness in action, an endless series of textured relationships that move into and influence each other
(Cooper & Fox, 1990, as cited in Stohl, 1995, p.23).

Characteristics of networks

- Networks can consist of people, groups, or organizations (p.27). The level of analysis determines what we look for.
- Networks have different functions, such as, authority, friendship, expertise, status, and information exchange networks (p. 36).
- Networks range in size from a few people to an unlimited amount depending upon how we define a link (p. 27).
- Links between people and organizations can be defined as strong or weak. This will determine how big a network is. Weaker links often yield bigger networks (p.27).
- Network boundaries are rarely solid or stable. Rather they overlap and change over time. The boundaries are diffused, because the social action cannot be isolated. For example, by making a new friend, we might also extend our professional "expert" network and not only our "friendship" network.

The many roles of the network: connectedness in action

From Stohl's perspective, which she outlines clearly in her book, organizations as networks are seen as "indefinable interactive systems of interacting individuals pursuing multiple objectives through coordinated acts and relationships" (p. 23).

The networks, in this sense, become symbolic representation of connectedness. When communicating via the network understandings are created. This understanding is not necessarily mutual among parties, but some sort of understanding is reached. In other words "networks of understanding are created through coordinated acts and relationships" (p. 23).

- **Positions in the network are embedded with expectations that help us interpret the communication in the network** For example, professors knows how to interact with students based on the institutional norms that guide the "expected" behavior of a professor. Likewise, students know how to interpret the behavior.
- **A network can help us create relationships with other people and organizations**In other words, via members in the network we make new connections and reach new understandings.
- **The network can help us make decisions** For example, a person might hear about a job opening via her professional network and thus may decide to leave her current position. Without this knowledge, she might not have made this decision, even if she thought of leaving.
- **Networks helps us identify ourselves via comparisons with "others" – whether others are persons or companies.**In other words, the network helps us understand where we fit in the bigger picture. Knowing what makes us different from others, can help us better understand what we are. The "we" can be a person or an organization.

Explanation of organizational form- and structure

It is useful for the reader to understand what it commonly understood as "organizational form" and "organizational structure" in the organizational communication literature, in order to get a better sense of the network perspective. The following are some brief explanations from key authors in the field of organizational communication.

Organizational form

Organizational form is the organizational structures, including communication networks, that share patterns across a large number of organizations (McKelvey, in Monge & Contractor, 2001).

An element of organizational form is anything that can be observed in a large number of organizations. It might help to think about Max Weber and his writings about the bureaucracy. He did not "invent" the bureaucracy in his writing, but he was among the first to offer thoughtful descriptions of their form and behavior, including elements such as procedures, rules, and many administrative levels, because these were elements that could be observed across a large number of bureaucratic organizations.

Organizational structure

Organizational structure "refers to the solid parts of an organization – *the framework* that gives the organization shape, not just this moment but over time" (Cheney & Christensen, in press, italics in the original).

Noteworthy, Cheney & Christensen point out that structure is a communication shortcut, in terms of what we know of what we can expect from each other and activities in the organization - "structure emerges out of some communication processes, but it also helps to influence patterns of communication." For example, there is no need to revisit the procedure for a standard meeting each time a meeting is held, we know how such a meeting should be run because the meeting will have an agenda (an element of structure in the form of a procedures) we know.

Summary of the network perspective

In summary, through the network lens, the "structure" of networked and virtual organizations are relationships among people that are mediated via technologies. The latter point is of great importance to the facilitator working with networked organizations. Such *facilitators must be aware that the guidance they offer in helping to build relationships may affect how the network, and thus the structure of the organization, is eventually shaped.* This is a very important reason for why facilitators should have knowledge about network theories. Another important reason for why facilitators should be aware of network theories is that these theories can be utilized to gain insight into

communication patterns in the organization. This can be crucial when working to improve the use of communication channels. *Through the network lens, the facilitator can focus on relationships between people and the communication that is exchanged. It is just these aspects of organization that are the facilitator's job to work with.*

Example from the literature that illustrates how the network perspective can be used to understand communication in organizations

Voice-mail: a success for some and a failure for others

The example is hypothetical, so it might seems strange that I included it. However, the example is drawn from an outstanding reading on use of the network perspective. The authors explain clearly how network theory can be utilized to better understand communication and relationships mediated via technologies in organizations as well as the social dynamics that are attached to the use of a new technology. The article is from Fulk's and Steinfeld's key volume "Communication and Organization" from 1990. This work served as an inspiration for other researchers to conduct more important research on new organizational forms.

The CEO along with top-management supported and strongly encouraged use of voice-mail in an organization, something that was rather unusual both in the city and the industry (this was in the late 80s, so voice-mail was still quite rare). The system had been tested as a pilot-project on top-management and was an instant success.

The voice mail system was not adopted in a similar manner in the organization as a whole. The sales representatives used the voice-mail system often and were satisfied with it, likewise for workers working on the assembly line. The management was also satisfied with the system.

As unforeseen by the CEO, accountants and engineers had problems with the system because they could not communicate text, numbers and visual aids, as they needed to do their jobs. While other departments, such as sales, used the voice-mail system often *and to establish more frequent contact across departments*, the accountants and the engineers was left out from daily communications and did not use the system for productive work. The engineering department felt increasingly isolated from the rest of the organization.

As we can see, using the network perspective, we were able to capture communication processes in the organization. Because, we used this perspective, we were able to see the elements of the communication that was not working. In some places, the system lead to more productive work while in other places it led to isolation. A facilitator could have captured this communication by utilizing the recommendations I outlined above. Had the above questions been asked as part of a needs-assessment by a facilitator, the system might not have been implemented. Instead, email or a groupware system would most likely be more useful, because it would support the various types of information employees needed to send, ranging from brief messages to long documents.

Based on Contractor & Eisenberg, in Communication and Organization, 1990. The case study is paraphrased, not quoted.

Recommendation for communication behaviors: using the network perspective to understand communication in networked organizations

"Network theories provide us with a vocabulary for identifying and measuring information flow between people, about a variety of topics, using a variety of media."
Monge & Contractor 1987,in Contractor & Eisenberg, 1990, p.151.

What communication occured in the group today?

Charting the network of relationships between people is one way of using the network perspective. This way, the network perspective can help you understand human behavior via technologies. You will enhance your understanding of the way a group interacts via communication media and other channels. Simply ask each member of the group to record their interactions and meetings with collleagues via the Internet and other communication media. It should be sufficient to ask the group to do this for a couple of days in order to get an idea of how the group "meet."

Ask questions such as: *Who talks to whom? Who did you communicate with today? How often did you talk to these people? Which media/communication channels did you use? How did the media you used work for you?*

The chart can be used to find more effective ways of meeting. For example, if you find that certain members of the group only talk to some people and exclude others, ask the group if this is a productive way to work. Other inefficient behaviors that might be found are: people don't notify key people of meetings, one person seem to run the whole group, they can't get a hold of people that really need to talk to, and some people hide information.

How would the group members like to communicate to be more productive?

To get a feel of how people in the group would like to communicate to be more productive simply ask them to answer the same questions as above in terms of how they would like to communicate. For example: *Who did you talk with the past days? Who could you have talked with that would have made your workday more productive? What media could have helped you be more productive?*

To remind group members of that they too are responsible for good communication in the group, include questions that emphasize this point. You don't want your needs-assessment to turn into a griping session of how poorly the group communicates. Rather, you want a list of suggestions of what each individual can do to improve communication in the group. For example, ask: *What can you do to improve communication in the group? How could you help another group member with having a more productive workday?*

As I have pointed out above, be aware of the your responsibility when conducting such assessments. Your input may influence how people structure their groups in thus in turn the structure of the organization.

The virtual organization – organizations as conceptual creations

> We are beginning to see more signs of these "virtual organizations," organizations that do not have all the people, or sometimes, any of the people, in one place in order to deliver their service. The organizations exist, but you can't see it. It's a network, not an office.
> (Charles Handy, in Dutton, 1999, p.473)

> The twentieth century will be known as "the century of the organization" ...and we're seeing the whitering of the employment organization. It won't totally disappear, but it will be reduced to an organizing core. Organizations will literally live up to the name, - they will organize.
> (Charles Handy, in interview with Barbara Ettorre, 1999, p.21)

The terms "virtual organization" and "cyberorganization" are often used in academic- and popular literature. *The virtual organization, as a certain type of networked organization, can be seen as networks of relationships between people that are mediated via technologies.* These networked relationships together create an organizing unit. *The ideal form of the virtual organization consists of nothing except networks of people and teams that communicate via electronic communication media in order to deliver a product or service. The organization is strictly a communication network.* Thus, human-to-human computer interaction completely substitutes face-to-face interaction in the ideal virtual organization.

The virtual organization is more a conceptual creation than an entity, because the organization primarily exists in the minds of people that are related to the organization, and not as a workplace in the tangible form of an office. Such organizations are a system of firms, an open-ended system of ideas and activities that often lack a clear structure and definable boundary (Morgan, 1989). The typical worker in such organizations is the knowledge worker, people who sell their skillset to various organizations. It is not uncommon that knowledge workers work for many organizations at the same time. As predicted by major publications in articles concerning "the workplace revolution" people

will not so much be hired to fill a position, rather people will be hired to utilize their skills across an organization (See box below). Perhaps the most publicized example of a truly space-independent corporation is Verifone, a vendor of security solutions and electronic payment system with worldwide operations generating annual revenue of $ 387 million. Verifone is 100% electronic: The entire company, comprising 1,900 employees in 30 worldwide locations, is networked and works on-line. Their URL is: www.verifore.com (Dutton, 1999).

When working with organizations that are virtual to a strong degree, the facilitator must keep in mind that such organizations are communication networks and that the network is largely maintained via electronic communication. *Giving poor advice for how to set up electronic communication practices can have especially fatal consequences for the virtual organizations.* One important step the facilitator should take to avoid this, is to put to use the network perspective in order to understand how people communicate today and how they might communicate more easily in the future.

Trends in companies and the workplace revolution

There are many trends in the workforce that illustrate the increase of knowledgeworkers:

- The largest private employer in the U.S. in 1997 was not IBM or General Motors. It was the temporary-employment agency Manpower Inc., employing 2 million people.
- Twenty-five years ago, one in five U.S. workers were employed by a Fortune 500 company. Today, the ratio has dropped to less than one in ten.
- As pointed out by Malone and Laubacher (1998) larger companies are growing hollow. They may control the cash, but have less control over actual business activity. Increasingly, companies are outsourcing business activities.
- The U.S. computer-display version of the Finnish company Nokia, chose to enter the U.S. display market with only five employees. Technical support, logistics, sales and marketing were all subcontracted to specialists around the country.
- Topsy Tail, a fashion accessories company with revenues of $ 80 million, has only three employees. The company never touches its product throughout the entire supply chain (all of the above from: Malone, T. & Laubacher. R.,1998).
- The Bureau of Labor statistics estimates that number of temporarily workers has soared 50% between 1996 and 2006 (Business Week, 1999).
- 57% Work at home, before or after regular business hours .14% Work at home occasionally, during office hours, on no-fixed schedule (American Management Association, 2000).
- Verespej (1995, in Industry Week) predicts that the following changes will be common in 2020.
- People will be hired for skills to work on projects, not to fill job vacancies.
- The number of core workers will continue to shrink, and worker loyalty will be to products, customers, and services.
- There will be fewer layers of management
- Companies will have less office space and more people will work independently in nontraditional workplaces.

Recommended readings:

Lucas, H. & Baroudi, J. (1994). The role of information technology in organizational design, Journal of Management Information Systems, 10,4: pp. 9-23

This articles concludes: "We believe that the design of information technology is the design of organizations" (p.23). A great reading that enhances the understanding of how to understand how communication via information technology can become the organization.

Fulk, J. & Steinfeld, C. (1990). Organizations and communication technology Newbury Park: Sage Publications

Chapter 2 and 3 offer insight to technology as organization. Chapter 7 is my favorite on network theory. Pages 151-161 are especially helpful to the cyberfacilitator because they explain why and how network theories are useful to understanding technologies. The chapter is written by Noshir S. Contractor and Eric M. Eisenberg, both leading figures in the development of network theory.

Monge, P. & Contractor, N.S. (2001). Emergence of communication networks in Jablin, F.M., & Putman, L.L., Handbook of organizational communication (2nd Ed.).Thousand Oaks, CA: Sage.

The first part of this chapter offers insight to the literature on the relationship between formal and emergent networks, and a brief discussion of organizational form. Network theory is explained. This chapter should be read in conjunction with Ch.7 in Fulk & Steinfelt (1990).

DeSanctis, G. & Fulk, J.(1999). Shaping organization form: communication, connection, & community, Thousand Oaks, CA: Sage

This is the follow-up of the 1990 book Communication and Organization (see above). DeSanctis' and Fulk's chapter on technology and organizational form (Ch. 1, pp. 5-32) and Dutton's chapter on the virtual organization (Ch.16, pp.473-496), are both very helpful when seeking to understand emergent organizational forms.

Morgan. G. (1989). From bureaucracies to networks: the emergence of new organizational forms, in Creative organization theory: aresourcebook, Newsbury Park, CA: Sage

This chapter is the best overview of organizational forms I have read.

Hesselbein, F, Goldsmith, M, & Bechard, R. (1997). The organization of the future San Francisco: Jossey-Bass Publishers

While many chapters in this volume are well worth reading, the introduction by Peter Drucker and the prologue by Charles Handy, both giants in the popular literature, help to understand the development of organizations across the past century and where we might be headed.

CHAPTER FOUR
SOCIAL USES OF TECHNOLOGIES: TECHNOLOGIES AS SOCIAL PHENOMENA AND REINVENTION OF TECHNOLOGIES

> There is no such thing as pure technology. To understand technology one must first understand social relationships. To understand social relationships one must understand communication. Everything about the adaptation and uses of media is social.
> (Contractor & Eisenberg, 1990, p. 143)

In the next two chapters I discuss the use of communication technologies from two perspectives. These perspectives are often called "social uses" perspectives in the literature. *Such perspectives focus on human use of technologies, often on how communication in the workplace affects the actual use of a technology.* It is essential for the facilitator to have insight into this, because she must guide users in promoting communication behaviors that encourage productive uses. For example, a hostile work environment where people are scared of experimenting will most likely not be a good environment for technological innovations. This chapter will help the facilitator be aware of such situations and other obstacles in the way of productive uses of technologies.

In this chapter, I first explain how we started to see technologies as social in nature. This represents a change in perception from seeing technologies as neutral objects towards seeing them as social creations imbedded with values. Second, I explain key elements of social uses of technologies, for example users' recreation of technologies via use. Roughly, understanding technologies as social creations means that technologies are seen as a contextualized part of our surroundings. *It is an interplay between the user and the technology that is shaped by the environment surrounding them and visa versa. This interplay is often the focus of research on social use of technologies.* In the next chapter I will explain how peoples' uses of technologies are influenced by their communication

with other people in the environment they are a part of. Altogether, the above insights speak of a need to extend the traditional notion of implementation of technologies, which assumes that the technology is "implemented" upon entry in the organization. It is evident from research on social uses that it is not that simple. Instead, it is a process that can take a long time and it might not be successful. This understanding will be discussed at the end of this chapter.

A comment on social uses and human communication

The part of the context that is of most interest for researchers studying the use of technologies is the social environment. *From this point of view it is as important to understand social relationships and communication patterns, both important elements of a social environment, as it is to understand the nuts and bolts of the technology.* One important reason is that social relationships and expectations appear to shape the use of technologies. For example, the approach the management takestowards a new technology influences the ways employees eventually put the technology to work. Allowing employees to spend time discussing a new technology and time learning to use it, has been found to increase the quality of use (see Rice, 1984).

The above, and similar insights, lead to the realization that users*reinvent* technologies (see Johnson & Rice, 1987). *That is, a social technology can be used in numerous ways depending on how it is used, because users "recreate" technologies through use. From this perspective, the social environment and the human communication in it are seen as influences that affect the use of a technology.* Furthermore, researchers have come to understand that the process of learning to use a technology and adapting it to a particular environment is evolutionary -- a step-buy-step

process with no clearly defined end-point. Thus, it should be expected that ittakes time before the potential use of the technology is realized. *Reinvention will be discussed in more depth in this chapter, because this concept is very useful to help us understand the processes that occur after the technology is implemented.* First, however, I will offer an overview of when we started to see technologies as social creations. It is important to have knowledge of this perspective because it is the basis for further research.

A change in perception – technologies as social creations

Starting to see technologies as social in nature leads to the realization that it is important to understand the use of technologies. Since then, vast amounts of good research have been conducted on the use of technologies. Much of this research is based on observations of activities of use in the early phase of a technology's life in an organization (see Rice, 1984). The thought of technologies as social creations was initiated by Heidegger and Ong in the late 70's and early 80's. *These scholars posited the idea that a technology is social in nature. From this perspective, the technology is seen as something uncontrollable that is shaped by its users and environment and vise versa.* As Giddens stated in 1979: "The social technology shapes the user, but the user likewise shape the technology" (Poole & DeSanctis, 1990, p. 177). From this view, a technology shapes our actions because there are certain things it will allow us to do, and others it will not allow us to do. At the same time, we shape the technology because we will use it in a way that fit the context we are a part of. The outcome of this interplay is hard to predict, so unexpected uses should not come as a surprise. This means that we can not expect that the actual use of a technology will be in accordance with what was for hoped in advance. The case study I described on page 38 is a good example of

unexpected uses of a communication technology. I explained that voice mail was implemented in this organization to increase communication among workers and departments. It was assumed that this would happen because the pilot test was a success. Some departments did increase their communication with each other and considered the system a success. However, the engineering department felt isolated after the system was introduced, because they could not send text and figure, as they needed to, via the system. It was also expected that the system would lead to more communication between managers and workers. Instead, many workers across the organization used the system to avoid direct contact with managers (Contractor & Eisenberg, 1990). As we can see from example, the voicemail system had uses no one predicted.

An important point of the above research is that it is not useful to look at CMC technologies as objects or tools we must relate to. Many will argue that this has traditionally been done. One perspective that looks at technologies as objects is the perspective of technologies as a value neutral tool that can be controlled. From this perspective, we can control the technology because we can control the environment. The environment, such as the values the management impose, are not seen as part of the technology but distinct from it. On the contrary, from the socialuses perspectives, values in the environment is seen as values imbedded into the technology. The technology is, thus, not seen as a value-neutral tool. Another view of technologies is looking at technologies as something that get implemented with certain consequences in mind but other unintended consequences occur (see Tenner, 1997). This view is more similar to the view of technologies as social creations. For example, this view help us understand

that email can be implemented to increase the level of communication, but instead it leads to isolation because users are not comfortable with email and avoid use of it.

Communication technologies should improve communication processes to be deserving of being called a success

A very important contribution you can make as a facilitator in the cybersetting is to assist people in not using technologies to recreate what they already do, but to create new and more productive ways of doing things. In other words, an important part of your job is to help people communicate more effectively via technologies than via other channels. If people cannot improve their communication by use of a technology, it is really no reason to use that technology.

Researchers call improving communication among people by help of communication technologies infusion. It is only fair to call the use a technology sound if it supports communication in a manner that can be described as infusion. Clearly, there are degrees of sound uses and it will most likely take time to reach the infusion stage, however, you should always work towards this goal (see Johnson & Rice, 1987).

Example of sound uses: uses leading to improved communication

Example 1: Creative use of email

One study found a creative and collective use of e-mail that was more useful than the traditional use of email. People used the forward feature to include the prior message as well as an annotation of other relevant emails. A "chained" set of annotations allowed newcomers to enter into discussions without having participated earlier (Rice & Webster, 2000).

This use of email has a stronger degree of infusion than use of e-mail that replaces existing forms of communication. For example, when e-mail is used instead of phone or voice-mail to leave a message. Another important aspect of this example is that email is utilized to its fullest potential, allowing for new and more productive ways of communicating than traditional media allow. Last, this use enhances collaboration because people share accumulated knowledge in a productive way.

Example 2: Acting on the input of others

It's often important that people act on the contributions of others using groupware tools. The need for collaboration might be the most important reason why mangers want to use groupware. However, groupware does not always enhance collaboration. Whether collaboration is supported depends on how the groupware tool is used.

For example, when participating in brainstorming sessions some people just want to come up with their own ideas and are not willing to act on the input of others. When the goal of the brainstorming session is to bounce of each other's ideas this use cannot be seen as infusion. To avoid such uses it is crucial that the facilitator and the mangers clarify why the groupware is used and make clear that it is expected that participants read and act on the input of others -- just like one would do during a face-to-face brainstorming session.

The process of reinvention of technologies

> The structuring of technologies in use refers to the processes through which users manipulate their technologies to accomplish work and the ways in which such actions draws on and reproduces (sometimes changes) the particular social contexts within which they work.
> (Orlikowski, Yates, Okamura, & Fujimoto, 1999, p.137)

Ronald Rice and his colleagues were among the first to describe the dialectical interplay between users and technologies as well as how users over time recreate technologies when using them. Their work is often focused on the reinvention of technologies. *This work has offered substantial support for the conclusion that human use of a technology makes it what it is.* One important point of their early research is that word processing software was used in many ways, because users choose to use it differently. Some offices used word-processing software as a word processing tool only. Others utilized the word-processing tool to create information systems that were extremely helpful for the organization. *In other words, this technology was used in many ways, depending on how the user put it to work.* By describing how users change technologies through the evolution-of-use processes of users adapting the technology to their environment and needs, it is clear that the reinvention phase is crucial. Reinvention is defined as: "How the user changes an innovation [of a technology] after it is adopted" (Johnson & Rice, 1987, p.169). An important implication of the process of reinvention is that a technology may not be used the way it was initially planned to be used. *Reinvention, thus, offers a partial explanation for why technological innovations sometimes fail and other times succeed.*

Other researchers have supported the finding that people use technologies differently. For example, Poole & DeSantis (1990) took this point of view in their pioneering 1990 article on groupware. They noted that it has been striking that findings

on groupware have been inconsistent. Some studies have found that groupware increases participation; others find the opposite. Some studies find that groups improve their performance, while others do not. These different findings may be attributed to differences in study design, task, instrumentation, or diversity of the groupware software. Interestingly, Poole & DeSanctis posed different explanation. *They posited that the observed differences across studies of groupware are attributable to the fact that different groups use groupware differently.* Taking to account the concept of reinvention and other research on social uses of technologies, this suggestion seems very reasonable (Poole & DeSanctis, 1990).

Users reinvention of media
Essential theoretical concepts: reinvention, infusion & adaptation

Reinvention & the evolution of use

Reinvention is defined as "how the user changes an innovation after it's adapted" (Johnson & Rice, 1997, p.169). The term, thus, is used to capture the processes of evolution of use, that is, the process after the technology is put to use in an organization when users gradually learn to utilize the technology. Some ways of learning to use a technology include: learning by doing, training, chatting with others, and experimenting with the technology. The most important thing for the cyberfacilitator to keep in mind is that because users reinvent technologies after it's adopted each technology can be used in numerous ways. Thus, the expected and uses may not occur.

Infusion - not always the case

Infusion is the goal of using technology. The concept refers to improved organizational effectiveness and communication as a result of use of technologies. Infusion may be an outcome of high level of reinvention, but this *is not always the case.* A technology might be wanted and adapted, but only sparsely used over time. Other times technologies are used extensively, but very ineffectively (Webster & Rice, 2000).

The adaptation process

The adaptation process may be seen as part of the reinvention processes. Overall, adaptation can be seen as agreeing to put a technology to use. Adaptation can be a challenge in itself. An ideal model of adoption follows: During the adaptation phase the organization first has some sort of rationale for what problems the technology is supposed to fix. Second, there must be a match between a problem and a solution. That is, it must be something about the technology that people are willing to support. Here, it's crucial that the technology is supported from top-management, that people perceive the technology fits their experiences and beliefs, just to mention a few aspects. Third, during the redefining stage the technology is adopted to the organization's need (at least it should be). Forth, the technology is adapted to the structure of the organization. Finally, the technology may yield interconnectivity between members in the organization (Johnson & Rice, 1984, pp. 162-169).

Trends in Technical Support

The Web is dramatically changing the way people request and receives technical support. As more and more people gain access to the Web and to e-mail systems, they are increasingly using these technologies -- rather than their telephones -- to find solutions to their technical problems. According to IDC, the electronic technical support market has grown by more than 400% during the past two years. While this explosive growth is expected to settle down, the Web and e-mail will continue to gain popularity as a means of requesting and receiving technical support at least through the year 2000.

(www.stream.com)

It is interesting that technical support services are a rapidly growing industry. Considering the findings from research it is likely that organizations have come to realize that it is necessary to support uses of technologies and that it is not sufficient to expect that employees will "figure it out." It will be exciting to see what kind of support technical support services will grow the most in the future.

Reinvention – a new perspective on "implementation" of technologies

Established models of implementation, taught in many information science and computer science departments, *do not address what happens with technologies when they are put to use, unlike the example of reinvention does* (Orlikowski, Yates, Okamura, & Fujimoto, 1999). Often, these following concepts are part of the established model: needs-assessment for technology, planning of technology, design of technology, and implementation of technology. In such models, implementation is often seen as the "technical making" of the technology and the distribution of it to theusers : "It seems to be assumed that the accommodation of technology to the context takes place at the time of implementation" (Orlikowski, p.134).

These models fall short for many reasons. For one, they do not address the fact that even if the technology "fits" the needs of the users and the organization at the point of entry, it may not be a fit over time. In other words, over time, it can become obvious that a technological innovation that was thought to be a good fit for the organization is not. The traditional model of implementation neglects the fact that users' recreation of

the technology does not necessarily take place right away. *Reinvention can be seen as an extenuation of the implementation stage of technologies, because the concept captures how users recreate technologies through the evolution-of-use.* In a sense, implementation never stops because people perceptually continue to learn how to put a technology to use. Thus, they will continuously invent new ways of using the technology. Other times, prolonged implementation can result in the "death" of the technology. That is, people gradually stops using it (Rice &Webster, 2000).

Overall, *it is important to remember that a great technology that fits the organization and its people does not guarantee that it will be used over time.* It might not be used at all, despite being a technology that is obviously beneficial. For example, many organizations wish to utilize groupware because it is hard for people to collaborate across time zones and when working at home. Thus, groupware can seem to hold an obvious advantage that will help people in an organization, because they can meet more easily. However, researchers and consultants report that it is not that simple. There can be many reasons for why the groupware is not beneficial -- for example, the meeting have an electronic feel, it is hard to learn to use the groupware, people cannot get used to scheduling meetings via email, or the groupware somehow violates social norms in the organization (see Wallance, 1997).

In his classic book on technological innovation, Diffusion of Innovations, Everett Rogers offers insight to the phenomena of technological innovations (Rogers, 1983).*He points out the "waves" of innovation.* In other words, it can take a long time before the full potential of a new technology is reached, if it is reached at all. Overall,*Rogers warns against oversimplifying technological innovations.* A number of stages should be

expected -- the knowledge stage, the persuasion stage, the decision stage, the implementation stage, and the confirmation stage (p.164). One important aspect of social behavior that Rogers points out during the confirmation stage, after the technology is adopted, is that sometimes people obtain information about why they should not adopt a technology, after they have decided to adopt it. In other words, *that users favor a technology at one point does not guarantee that they will hold that position.* Other times, people find out that they should have adapted the technology after they initially rejected it. This tells us that *technologies can become a success even if people are not in favor of it at first. Rogers calls these behaviors "discountiance" and "later adoption,"* respectively (p.185). One important influence on these behaviors is the social system the users are a part of. Users will often be influenced by peers throughout the process of technological innovation. Often, people will tend to take the view of others in the social system to which they belong. *The knowledge gained from studies on reinvention and technological innovation tells the facilitator that it is extremely important to follow-up with users as well as to pay close attention to the norms in the social system the users are a part of.* The facilitator must keep in mind that the most challenging part of their job might be the phases that take place after the technology is "implemented."

Recommendations for communication behaviors: tips for creating an environment that encourages productive uses of technology

There are many obstacles in the way of a successful implementation of technologies. The following are some pointers from the literature that has been discussed in this chapter. Overall, it's important to keep in mind that technological innovations take time and there are many behaviors in the way of productive uses.

Leadership issues that can work against productive uses

- The management does not encourage development of new skills needed to improve at using the technology. Experimenting with technologies is seen as a waste of time. This can result in little use and/or little experimentation with the technology.
- People don't seem to discuss use of technologies and share "Ah-Ha" experiences on how they can best be put to use. This might result in re-creation of other communication patterns. This rarely the goal of using a technology.
- Little training in use of the technology might put an effective stopper on peoples comfort level with it.
- There are few jobs that encourage communication among colleges, such as database administrators and other technical support staff. This can make communication more difficult, because it is hard to share knowledge and data.
  (Johnson & Rice, 1987)

Group dynamics that can work against productive uses

- There are many obstacles in the way of collaboration. For example, employees are rewarded for individual achievements. This hinders collaboration and information sharing through the use of technologies. On the other hand, using groupware only for the best of the people in the group can hinder use of it, individuals want something for the effort of learning to use it.
- The groupware provide better benefits for some member than it does for others, resulting in some people resisting to use it, e.g. a person must type a lot of information into a software and she gets little in return, while others type little and get a large return.
- The groupware threatens taboos in the organizations, or otherwise violates social norms. (Grudin, 1994).
- Group issues such as status, power, and interest differences are not worked out, all of which facilitators should have knowledge of (see Mandviwalla & Olfman, 1994).

The social system work against productive uses

Users may change their opinion about the technology, depending upon the behaviors of other people in the social system they are a part of.

- Users may initially support the use of a technology, but then decide that they don't support it. People might change their opinion because other people they know did.
- Other times, people decide that they do want to support the use of a technology, even if they did initially supported it (see Rogers, 1983).

Recommended readings:

Rice, R. & Webster, J. (in press). Adoption, diffusion and use of new media in organizational settings in Akin.D. & Lin.C (Eds.) Communication technology and society, Cresshill,NJ: Hampton Press.

This article offers an overview of CMC technologies and their use in organizations. Aside from explaining concepts such as reinvention and infusion, recent statistics on the use of CMC technologies are presented. This article is an extremely helpful tool for orientation in the literature.

Johnson, B.M. & Rice, R. (1987). Managing organizational innovation: the evolution from word processing to office information systems New York: Columbia University Press. This book is a continuation of Chapter 7 in Rice's book "The New Media." The processes of reinvention and adaptation of technologies are explained in depth. Although this book is focused on the use of word processing software, many of the findings on contextual and other social influences on use of technologies can be applied to groupware.

Rousseau, D.A. (1989). "Managing the change to an automated office: lessons from five case studies." Office: technology and people,4 ,31-52.

Leonard-Barton, D.A. (1988). "Implementation as mutual adaptation of technology and organizations", Research Policy, 17, 251-267.

These articles discuss how established models of implementation are not sufficient for understanding the use of technologies.

Poole, M.S. & DeSanctis, G. (1990). Understanding the use of group decision support systems: the theory of adaptivestructuration, in Fulk, J. & Steinfeld, C. Organizations and communication technology,Newbury Park: Sage publications.

This classic article (it's still frequently cited) explains the need for understanding the social use of technologies exceptionally well. It was also one of the first articles that assessed the uses of groupware. Read this article before you read anything else about the use of technologies. It is well written and easily understandable, yet vast amounts of literature are incorporated.

Grudin, J. (1994). Groupware and social dynamics: eight challenges for developers Communications of the ACM, 37,1:93-105.

Mandviwalla ,M. & Olfman, L., (1994). What do groups need? A proposed set of generic groupware requirements ACM transactions on human-computer interaction, 1, 3: 245-268.

Wallance, M. (1997). Groupware: if you build it, they may not come IEEE transactions on professional communication, 40,1: 48-53.

These articles are examples of the practically oriented research on groupware technologies. The ACM and IEEE databases are very helpful for finding practical advice. I find it useful to interpret these works within the "paradigm" of the more theoretical works I listed above. The ACM and IEEE databases are available for the public on the Internet. The student fee is reasonable.

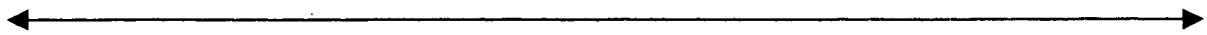
CHAPTER FIVE
SOCIAL USES OF TECHNOLOGIES: THE FACILITATOR AS A GUIDE FOR SHAPING OTHERS' USES OF TECHNOLOGIES

The aim of this section of the guidebook is to explain how peoples' uses of technologies are influenced by their interaction with other people. Since the mid-90's researchers have brought attention to how *the ways people perceive and use technologies are influenced by interactions with other people in their social network. The facilitator is one person that impacts the way people use technology.* It is not clear how strong the facilitator's influence is, but it is clear that people are likely to be influenced by the people they perceive as experts with a technology. People tend to adopt the expert's opinions about the technology as well as ways of using it. In this way, the technology expert guides others uses of a technology. Clearly, a facilitator of groupware sessions will be seen as such an expert. *This chapter will help the facilitator with taking an intentional approach when guiding peoples' uses of technologies. The facilitator should actively do this, because the "guidance" will take place whether the facilitator intends to or not.* In other words, people pick up behaviors regardless of whether the facilitator intends to. Therefore, *it makes sense to take advantage of this learning process.* This makes it important to distinguish between facilitators that actively seek to guide peoples' uses of technologies, and those that do not. Traditional facilitators are aware of similar strategies. For example, it is common sense for facilitators to avoid enacting behaviors that one would not like meeting participants to emulate. One is aware that people tend to enact behaviors they see and not only those they are told to do.

The power of guidance that occurs during interactions enhances our understanding of the contextualization of technologies, which was discussed in the prior

section. Remember how I explained that technologies are social, meaning that uses are affected by people, relationships, and situations. That is, it is an interplay between the user and the technology within the framework of a context (a social environment). Understanding that peoples' use of technologies is influenced by others in their social environment, help us further understand how users reinvent technologies during the "evolution of use" processes. As I explained in Chapter Four, during these post-implementation phases, users recreate technologies through use, thus, actual ways of utilizing the technology may be quite different from what was originally expected. *Overall, the social use perspectives help us understand many of the factors that underpin the shaping of communication via technologies.* Facilitators should, as I explained in the prior section, gain insight to clients' use of technologies. This is one step on the way towards better and more productive uses of technologies.

Figure 1: Summary of perspect,ive on social uses and technologies



Technologies are socialcreations	**Activities of use**	**Shaping of others' use**
Technologies are a contextualized part of our environment. The user shape the technology at the same time the technology shapes the user.	Users recreate technologies through use The context affect the use. One technology can be used many ways.	Interactions with other people affect one's use of technologies.

Based on: Johnson & Rice, 1987; Poole & DeSantctis, 1990; Olikowski et.al. (1999)

In Chapter Four I explained that technologies are social and that researchers observed activities of use. In this chapter I will explain how an individuals' use of a technology is affected by the interaction with other people in the context.

Technology-mediation – an important step towards successful implementation

> The research activities we report below identifies another set of structuring activities that although carried out by users, are not activities of use. The involve the shaping of others' activity of use, a process we designate as metastucturing. (Orlikowski, Yates, Okamura, & Fujimoto, 1999, p.138)

As mentioned above, researchers have recently come to understand that another way of contextualizing a technology is to learn ways of using it from other people in the context. This understanding is crucial for facilitators to keep in mind, because facilitators should seek to guide users towards sound uses of technologies. Taking on this role has been described in the literature as doing "technology-mediation". One study in particular has done a fine job of increasing the understanding of the process of shaping electronic communication. *It is in this study that the activity of technology-mediation is first described. The activity was observed as part of what might be seen as a step-vise reinvention process of a communication technology in an organization* (see "A theoretical model of technology-mediation and meatastructuring", p.52 for more detailed information about this process).

The term technology-mediation should not be confused with the practice of mediation in courthouses or conflict-resolution activities. Rather, technology-mediation is a term that has been used to capture the activity of one or more people shaping others use of technologies, whether this shaping is intentional or not. The facilitator could take a similar, but intentional, approach when interacting with clients. That is, *to shape other peoples' use of technologies the facilitator should play an ongoing and proactive role in the process of putting a technology to use. Not only must the facilitator be sure to explain the "nuts and bolts" of the technology, she must also explain the rationale and the goals that support use of the technology*, focusing on how it can help to improve

communication. It is necessary that the facilitator take the time to allow for people to share their experiences or concerns about the new technology.

A crucial aspect of this study that makes it so interesting for facilitators is that it describes well how a team of individuals, whose members were selected from throughout the organization, successfully guided many other teams through the challenges of learning how to use a new communication media. The changes accompanying the use of the new communication media, learning to utilize the technology to improve communication included, seemed to go more smoothly because someone was there to guide and steer the process towards this goal.

It should be noted that the team intentionally guided the use of the technology knowingly. Their goal was to work towards improving communication in the organization by use of the technology. In other words, they carefully planned and steered the process of reinvention, in a similar manner to how a facilitator might approach the same task. Importantly, this process provides one powerful way of understanding how technologies in use are contextualized, because it illustrates how one group shapes how others communicate via the media. This process is identified as metastructuring in the literature (Olikowski, et al, 1999). This view also helps us to gain further insight into how uses of technologies are adapted to fit the context and how the context continuously changes. Thus, there is a need for the use of technologies to change as well. In this study, the group found it necessary to change features of the technology several times, in order for the technology to fit the changing dynamics of the organization.

Examples of technology-mediation activities in companies

Example 1: An electronic personal assistant

Xip is a European based company that has specialized in technical support. Their approach has a new twist for at least three reasons: (a) The technical support comes in the form of an "electronic personal assistant, ready to support the user with his or her Windows or web-based application at any time." (b) Users are invited to share their experiences via a media. Over time, users will build their own tutorials that fit their worktasks. (c) The user's industry experience can be incorporated into the electronic personal assistant, e.g. the way an accountant sets up a payroll system.

This approach to technical support is strikingly different from the more traditional model where users must call their company's technical support staff team or a call a technical support service the company has a contract with. Xip's model is more proactive and continuous, allowing the user to get help when they need it. The function of the software can be compared to the assistance a facilitator might offer. Furthermore, Xip' approach is closer to the ongoing approach that technology-mediation suggests, because the user build her confidence with the technology step-by-step.

(www.xhip.com)

Example 2: Having a group of electronic mentors available

Smartforce offers courses via the Internet for students on various subjects. Most of the training is related to work tasks -- some courses include learning to use a new technologies to improve work routines. An important distinction between Smartforce and many other e-learning companies is that they offer real people as mentors at all times.

"With the Smartforce mentoring methodology, students receive personalized training support from a team SmartMentors through the use of various internet (sic) technologies; particularly e-mail, online chats, and threaded course discussion groups."

Too many long-distance courses do not have successful results. One reason might be that the students don't get appropriately accommodated with the technologies the course requires them to use. Often students are expected to just cope with the technology on their own time. Having an on-line mentor available might make the difference between a good and a bad learning experience. Overall, it is interesting that Smartforce has chosen this approach to on-line learning. It is one example among many, indicating the trend of having a person come along with the technology.

(From www.smartforce.com)

A THEORETICAL MODEL OF TECHNOLOGY-MEDIATION & METASTRUCTURING

Facts about the study

The observed project teams worked in the R & D division in a large Japanese manufacturing firm during the late 80s and early 90s. About 150 employees worked in these groups. All members were experienced computer users and had powerful networked workstations. The focus of the study was the introduction and use of a news system software. The system allowed users to post and read email messages, which were organized hierarchically into topics known as newsgroups.

The group subject to collection of data was called NAGA. This group was a "help project group" consisting of nine members from various teams. NAGA lead and supported the use of the news system, for example by managing policies and processes related to use of the technology. The discussions with the other employees and within NAGA occurred via the news system. Data was collected from analysis of e-mails within the NAGA group and among members of the R & D division. Numerous interviews were also conducted with informants in the NAGA group.

The metastructuring process: a form of reinvention of a communication media

The most striking feature of this study is that the NAGA group deliberately worked to ensure that the technology was a successful reinvention. The authors describe this reinvention as a process with several phases: establishment, reinforcement and adjustment, and episodic change. They call this the metastructuring process.

Establishment

Stages:

- Set up the technology physically in the organization
- Establish the technology socially in the organization

This phase is often the hardest phase, because the establishment process will reinforce, adjust, and/or replace existing practices. Facilitators should this expect to meet of resistance at this point in the process. Numerous steps must be taken to avoid neglection of the new media.

NAGA spent almost two months discussing ideas, soliciting feedback, articulating the role of the newsystem, persuading managers to proclaim the new system an official medium, and facilitating a comfortable transition for project members to this new communication technology.

Reinforcement and adjustment

Stages:

- Maintain the operation of the technology
- Adjust the technology further to fit the needs of the organization and alter rules of use as needed.

During this phase it is important that ongoing assistance, encouragement and support is offered to the users. The facilitators should offer active demonstration of how the technology can be incorporated into work practices, coupled with specific advice. Appropriate use may be promoted via training sessions. At this stage it might also be necessary to adjust features of the technology.

Episodic change

Stages:

- Redesign the technical functions and features of the technology
- Take a step back and assess the technology in the context of use

At this stage NAGA added new newsgroups to the system and added some new functionality to the newgroups.

Paraphrased from Orlikowski et al (1999)

Facilitation – a different role

The role I have suggested for the facilitator has some important differences from roles of other professionals that work with users after the technology is implemented. Training, for example, is often only offered upon initial access to a new technology rather than long-term. Unfortunately, such training does not include an explanation and discussion of the rationale supporting the use of the technology. Users are also left with little opportunity to discuss uses of the media during training. Similarly technical support staff people often work in a reactive mode. In other words, they repair things or answer basic questions about the technology, but do not knowingly seek to steer users towards a better use of the technology. The facilitator must avoid taking such approaches, and must actively seek to trigger discussion about uses with the long-term goal of working to improve communication in mind.

Meeting technologies are tools that can be misused

Jana Markowitz, an experienced and published facilitator utilizing electronic meeting systems (EMS) states in an article, in which she explores some pros and cons of EMS that she is "slightly bothered by the feeling that the technology of EMS is misunderstood, and in some cases, abhorred, by the group it is designed to serve - professional facilitators." She makes the point that she uses EMS during her facilitation when she finds it to be a useful tool and that she is "surprised that some reject EMS tools."

She then goes on to state that:

"From listening to the (quite valid) concerns voiced by those who shun technology in meetings, I have come to the conclusion that they may have seen EMS's presented by technology zealots who misunderstood and/or misrepresented the tools. For EMS are simply tool, just as hammers are tools. To stretch the analogy, you can use a hammer to break windows and crash thumbs, but properly used, it can also drive nails, remove nails and do some rather handy things. An EMS can be used to in many ways that frustrate people, interfere with natural meeting processes and suppress human interaction and it can be used as a facilitation tool to make meetings more efficient, less emotionally damaging and more fun."

Her point is very interesting in the light of the role I have proposed for the facilitator, because it illustrates the fact that it is a choice involved for how one wants to put a meeting technology to use. The facilitator should work hard to ensure that healthy uses are encouraged. EMS are just tools and the facilitator must work hard to avoid misunderstood uses.

Markowitz (1997)

Socialization – a learning process useful for the facilitator

Knowledge of socialization can help us further understand technology-mediation, because socialization is in many ways similar to technology-mediation. Socialization is commonly seen as the process of becoming a member of an organization. To become a well-functioning member of a larger team the newcomer must get a solid grasp of the culture as well as the norms and rules for behavior in the organization. Veterans in the organization will oftentimes teach the newcomer the "do's and don'ts" of the organization. This is an extremely important part of becoming a member of an organization (Cheney, Class notes, Spring 1998). Successful socialization is strongly related to whether a veteran teaches the newcomer appropriate rules for behaviors. Just as we can learn appropriate ways of behaving during socialization, we can learn sound ways of using technologies. Socialization in this sense is seen as "jamming" or collaboration between members of the organization (see Jablin,1987).

Our knowledge of socialization underscores the importance of learning from each other when introducing new technologies or seeking to advance the use of them. Therefore, the facilitator must ensure that such learning processes occur. The facilitator must also be aware that she is an important veteran in terms of knowing how to utilize the technology. In some cases the facilitator might be the only person who has thorough knowledge of the communication media in question. In such cases it is even more important that the facilitator think of herself as a socializer working to provide users with effective ways of communicating via the particular media.

Example of how the how technology-mediator can exhibit sound facilitation skills

The following is an email sent from a group of people, NAGA. This group acted as technology-mediators (see box p. 52 for further details about this study).

"Subject: 6 Dec 89 10:05:48 GMT

Newsgroups: misc

We need to discuss the following issues.

(1) The officially of this system is unclear. Must everyone read the general newsgroup? Will it be just like another bulletin board?
→ Should the new system be used simply according to a person's preference?

The next topic clarifies the relationship between the news system and other media such as meetings, bulletin boards and e-mail.

(2) The relationship of this news system to bulletin boards organized within each team, and any e-mail mailing lists in unclear.

As long as we use only these closed media, we cannot share useful information among all project members.

→ Should we not gain advantage of many members working together?

Please continue this discussion by e-mail on the news system."

The email is quoted from Orlikowski, 1999, pp. 144-146

As pointed out by the authors, NAGA's inclusive and encouraging approach, but not directive, built general support among members. This email triggered a discussion that had several positive outcomes, for example, most people gradually adopted the view that the system should be an official communication medium. It is questionable whether the introduction of the media would be successful if NAGA had not acted like they did to build general support. Their approach is similar to how a traditional facilitator might work to build consensus on issues among clients. Thus, this example clearly illustrates how important it is to incorporate traditional facilitation practices when working to ensure a successful adoption of a media.

INFORMATION SHARING AND THE NEED FOR A HUMAN MEDIATOR

An early study of teams utilizing computer conferencing tools found that it was a need for a "human process mediator" could help to support and motivate the group (Kerr, 1986, in Majchrzak et.al., 2000). A recent study, focused on knowledge sharing in a team, reached a similar conclusion.

A computer-mediated inter-organizational team working on a project was observed in this study. The team observed worked well together and was very productive, despite the troubles with the software. However, considerable time and information was not managed well because important pieces of information were lost in the system. The team members found that it was not feasible that the software itself could not incorporate all these functions.

As pointed out by the authors, the information sharing literature did not provide sufficient answers to the questions that were raised after the observations of the team. The authors instead choose to conclude that there appeared to be a need for "a human mediator."

The implications of this study are many. Clearly, the facilitator could take the role as the human mediator and work to get the media more soundly adopted than what was demonstrated in this study. Second, this team struggled with the technology in the post-implementation phase. Considering the understanding springing from the social uses perspectives on technologies many questions can be raised. For example, would this team have been even more successful if they had spent more time on developing sound uses in stead of 'fighting' existing practices that were not productive? Third, the team members did not communicate face-to-face much, they mainly communicated via the media. This illustrates that teams indeed can perform well even if they do not meet often. This contradicts the common assumption that less face-to-face communication is a disadvantage.

(Majchrzak, Rice, King, Malhotra, Ba (2000).

Summary: the role of the facilitator

The facilitator:

- Follows-up clients over time, not only initially. Facilitation is an ongoing approach.
- Encourages discussion of uses of technology. She might arrange meetings for this purpose.
- Intentionally promotes sound uses that will improve communication processes.
- Is responsible, knows that users learn to use technologies from others.
- Has knowledge of learning processes such as socialization.
- Is aware of her role as a guide. She knows that clients may pick up her way of using the technology, even when this in not intentional. Thus, she always keeps this in mind and acts accordingly.

Recommended readings that help us understand the facilitator as a guidehat shape others' use of technologies

There are few readings that relate to the guiding of others use of technologies. Aside from the research that has been discussed in this chapter, noteworthy exceptions include:

Contractor, N.S., Seibold, R.S., Heller, M.A.(1996). Interactional influence in the structuring of media usein groups: influence in members' perceptions of group decision support system use Human Communication Research, 22, 4:451-481.

This article discusses how peoples' use of a technology is influenced by other others in the context they are a part of. The major theoretical perspectives are covered. This article provides a good starting point for readers who wish to explore this area of literature.

Howell. J.M, &Higgens, C.A. (1990). Champions of technological innovation, Administrative Science Quarterly, 35:317-341.

This article describes typical characteristics of people that become technology champions in organizations. These people guide others' use of a technology. Often, this guidance will be unintentional.

CHAPTER SIX
THE PROCESS OF RUNNING CYBERMEETINGS AS COMPARED TRADITIONAL MEETINGS

Electronic meeting software helps improve meeting quality by permitting anonymous comments over networked computers and by encouraging equal membership participation during a meeting. (Chen, Hsu, Orwig, Hoopes, & Nunamaker, 1994, p. 56)

The aim of this chapter is to explain how the process of a cybermeeting supported by groupware is different from that of a traditional meeting. First, however, it is useful to briefly describe activities and conditions for cybermeetings. During cybermeetings, the groupware helps groups structure the meeting. Activities most groupware support include: brainstorming, categorizing of ideas, discussions, voting, and writing of documents -- or at least outlines for documents (see GroupSystems Manual, 1998, Ventana). The group will have access to the groupware tools that support such activities via a computer screen. One person, such as the facilitator, must start the groupware and set up the sessions. Often, a session will start with an overview of the activities the group will do that day, or the following days. Groupware meetings require that all meeting participants have access to high performance computers with network connections. It is not necessary for meeting participants to be in the same location. They do not even have to attend the meeting at the same time. The group members can share data during the meeting via the network and the groupware tools can be accessed at any time. Instead of talking during the meeting, participants will type comments on a key board and submit these. Most commonly, these comments can be read by all participants at any time.

Obviously, using groupware changes how meetings are run dramatically. Although the activities can seem the same, the process of the meeting changes because the groupware will structure the meeting differently from the traditional face-to-face conversation. There are many differences between the process of running a traditional

meeting and that of a cybermeeting. These differences come about because use of groupware and other technologies affect the structure of the communication process in the group. For example, during a groupware meeting everybody can "talk" at the same time because the software can support it. The computer can simultaneously record a practical unlimited amount of comments, so everyone can write at the same time. For this, and other reasons, the facilitator must be aware of the ways the communication process typically is changed in order to take advantage of groupware technologies. This is one important step the facilitator can take to combine the best of group processes with the best of technologies, which is a crucial aspect of the facilitator's job (seeCreigton & Adams, 1998).

The most important differences between the process of a traditional meeting and that of a cyubermeeting that I have identified in the literature are discussed in this section -- these include: different simultaneity of media, the option of anonymity, and "default" recording. Having knowledge of these will assist the facilitator in utilizing technologies to the full benefit of the group. However, seeking to combine the best of technologies with the best of group processes is a judgment call. As I have mentioned before (Chapter Two), the facilitator observes behaviors in the group and make decisions about what step to take next depending upon what was observed. Using technologies challenges the facilitator because it is necessary to continuously make choices among many possible ways of using technologies to assist the group. There are no straightforward answers but being aware of common pitfalls that research have revealed is helpful. This chapter will shed light on the most common obstacles facilitators using groupware tools will encounter when they seek to utilize technologies to the best of the group.

Different simultaneity of media – one versus many communication channels

The concurrency, or the distinct number of communication channels that are available at the same time, of traditional face-to-face media and technical media is different. Face-to-face communication is for the most part serial, whereone person talks at a time and participants take turns talking. Such communication allows for a limited number of channels and communication episodes. For example, if more thanone person talks at the same time, it is difficult to understand because the verbal communication channel gets clogged easily. On the contrary, when communicating viagroupware, and other collaborative technologies where participants use a keyboard, everyone can "talk" at the same time because the software can record a large number of parallel and distinct communication episodes. Technically, there is no need for participants to wait for "my turn to have the floor." (Nunamaker, Dennis, Valacich, Vogel, George, 1991 & Chen, Hsu, Orwig, Hoopes, & Nunamaker, 1994). In other words, multiple conversations can be going on at the same time when using groupware. Participants can take part in one discussion and ignore others. Meanwhile, other completely different conversations can take place between other participants. This is called "simultaneous multiple conversations" in the literature (see Dennis & Valacich, 1994).

Important ground rules for communication in a new light

When the media can support parallel communication, at least two ground-rules the traditional facilitator often use to organize the communication in the meeting loose their function. These two rules are: a) "one person speaks at a time"and b)"wait for your turn" (see Putz, 1998). These ground-rules are used by facilitators to manage a linear "one train of thought" type discussion. When enforcing these rules, the facilitator will monitor the interaction in the group and ensure that all group members get "their"

personal speaking time. In contrast, during computer supported meetings, the facilitator will most likely facilitate groups with many conversations taking place simultaneously. It often seems to be unavoidable that people start up sub-conversations (Chen et al, 1994).

It should be noted that talking at the same is breaking a major conversational rule in our society. Most of us learn turn-taking from childhood. Therefore, it can be very strange for people that are new to the parallel communication process to communicate this way. For example, they might attempt to follow along on all of the discussions. This is virtually impossible. In these cases, the facilitator should allow such participants to take their time getting used to the new communication process. It might also be necessary to explain the key differences of the communication processes more carefully. Attention to these details this should, preferably, be done prior to the meeting.

Parallel communication – mostly an advantage

> A major advantage of the meeting software is its ability to let the meeting participants brainstorm ideas in parallel mode. Often as many as several hundred comments can be generated by a group of 10-20 meeting participants during a typical one-hour brainstorming.
> (Chen, Hsu, Orwig, Hoopes, & Nunamaker 1994, p.56)

The literature offers some advice on how to manage groups having many conversations at the same time. Many authors advise that multiple monologues should be encouraged when the group is doing idea generation activities such as brainstorming. Groups often generate more and higher quality ideas this way. One important reason is that people do not have to wait when they have a great idea. Because of this, they will not forget it. On the downside, it is often very hard to come to a consensus with a large number of ideas. Therefore, parallelism does not seem to be an advantage when consensus is the primary goal of the meeting. Furthermore, when the group is working on categorizing ideas or otherwise organizing materials it might be best for the group to

work as a whole so that all group members feel that they own the group's work. This also helps to ensure that all group members understand what the group agreed about in the meeting.

Summary of challenges of parallel communication during group meetings

These challenges were discussed in the section above -- Different concurrency of media – one versus many communication channels

- Group members cannot follow all discussions going on at the same time. Thus, they can miss the big picture of the discussion. On the other hand, they can engage in the conversations of their choice.
- People that are new to this type of communication can find it hard to get used to it.
- The group can generate many more ideas than they are able to process. In other words, information overload is a common downside.
- It can be hard to reach consensus with a large number of options to choose from.

Some ideas for how you can utilize parallel communication to the benefit of the group

- You should not start a session without ensuring that all group members familiar with parallel communication, because it stands in sharp contrast to the way we are taught to organize a discussion from childhood. Keep in mind that people are used to a linear type of discussion where one person talks at a time. It can be useful to offer training in advance. At a minimum, write an explanatory email and distribute it well ahead of the meeting.
- Consider whether the activity of the meeting is suited for parallel communication. While parallel communication is generally seen as very helpful for idea-generation, it might not be as helpful for activities such as organizing of ideas and consensus building.
- To avoid information overload after brainstorming, you can ask each member to pick three ideas/comments from the list they worked on. Then, the group can vote on which comments they would like to spend more time on.

Anonymity - an option worthy of serious consideration

Electronic media can permit anonymous communication. Some groupware tools are anonymous while others require the user to identifythemselves. When the meeting software requires anonymity, the facilitator does not know who said what any more than the participants do. Anonymity has often been promoted as an advantage of electronic media by those who sell such tools, although presently it seems like the excitement about this option is on the decline.

Anonymity and the possibility for conflict

The literature offers good insight into the issue of anonymity in electronic meetings. In verbal face-to-face discussion, members might withhold their ideas out of fear of negative evaluation. Thus, knowing that you will not get evaluated as "you" when using electronic media *can* result in more open and honest discussions. Furthermore, studies have found that subordinates may not challenge ideas presented by their supervisor when they know they are being identified.(Janis & Mann 1977, as cited in Dennis & Valacich, 1994). Domination of high-status members may decrease when the idea source is unknown (Dennis & Valacich, 1994). Avoiding the withholding of ideas has been the "sell" argument for implementing anonymity. Conversely, getting the chance to speak without a face can lead people "to behave in ways that are outside of the realms of socially prescribed behavior" (Nunamaker, 1991, et al p [not known, retrieved from electronic database]). For example, I will share a quote from one ofNunamaker's many field-studies on Groupware. It illustrates how people can get into a spiral of being negative in electronic meetings:

> "I noticed that if someone criticized an idea of mine, I didn't get emotional about it. I guess when you are face-to-face and hear the boss say 'You are wrong' it's a slap to you, not necessarily the idea...[here] no one knows whose idea it is, so

> why be insulted? No one is picking on me. I think I'll just see why they don't agree with me".
> Manager at Huges Aircraft, Nunamaker, Dennis, Valacich, Vogel, George, 1991, p [not known, retrieved from electronic database]

In several empirical studies, anonymous groups generated more critical comments (Conolly, Jessup, & Galegher, 1990; Valacich, Dennis, & Nunamaker, 1991, both as cited in Nunamaker et al, 1991). Noteworthy, the conflicts are often related to task, not people issues (Walther, 1996). This indicates that the "conflict" can be to the advantage to the group, because tense discussion of task can increase the quality of the outcome. For example, if a heated discussion of how to best portray a business in a TV commercial occurs during a PR meeting, the conflict is most likely related to the task of the group and it can be a benefit for the group to stir up some issues. On the other hand, if the discussion focused on attacking specific people, it is most likely a conflict that is related to people, such as power struggles, and not the task of the group. The distinction between conflicts that are related to task and those that are related to people issues is very important in the facilitation literature. Discussion focused on the task (the content of the meeting) is generally judged to be an advantage to the group. In other words, asWalther (1996) suggests, generating more critical comments is not necessarily a disadvantage. However, few studies have found anonymous groups to be more effective than non-anonymous groups (Nunamaker et al, 1991). It should be noted that many studies were conducted in laboratory settings. The results might be different in the field. Last, anonymity is risky because some people may not participate at all. It can be tempting to be lazy when no one checks on you.

True anonymity versus relative anonymity

Research has found that electronic media is less rich than face-to-face interaction because social cues are harder to grasp (see Rice, 1984). One important reason supporting this argument is that we do not have the opportunity to interpret body language via most electronic media. Anonymity can work to make electronic communication even less rich because group members do not knowwho they are talking with (Nunamaker et al, 1991). However, this is an assumption that the facilitator should be careful to quickly act upon. The facilitator should consider that an anonymous conversation might not actually be anonymous. In groups where participants know each other in advance, members are likely to recognize the tone and wording ofcolleauges. It is also a danger that people begin attributing ideas to the wrong people. Because they think they know who said what, problems can quickly arise. Furthermore, many studies question the assumption of whether social cues are present via CMC media. Many find that social cues are transferred. For example, Witmer & Katzman (1998) found that woman tend to leave somewhat more "graphical accents" when communicating online than men. Voiskonusky (1998) reports that CMC tools "transform" the existing and familiar semiotic system in the human mind, and thus we can recognize them if we know them on beforehand. Taking these findings into account, it seems more adequate to talk about "relative anonymous environments".

Summary of challenges of anonymity
These challenges were discussed in the section above -- Anonymity, and option worthy of serious consideration

Anonymous discussions can be more honest and open, thus, people are encouraged to not withhold ideas. On the contrary, there is the risk that people may act out of line or do not participate at all. For example, they may attack people and not task issues.

- It is harder to grasp social cues during anonymous discussion because we can't relate the meaning of the message to what we know of the person.
- In groups where people know each other the meeting might not be actually anonymous because people recognize slang and expressions of their peers.
- People might wrongfully attribute comments to a person.

An interesting study: attribution accuracy when using anonymity in group support systems

This study explored the taken for granted assumption that "anonymous" comments posted on group support systems (GSS) are *socially* as well as *technically* anonymous.

Seven groups with considerable work history were observed. Some groups were from departments belonging to physical education and others were consultants, mangers and employees in various mid-sized firms. The groups used Group Systems GDSS software.

Interestingly, it was found that participants made attributions about author's identities - "but overall these attributions were 12 % accurate (ranging from 10-29%) (p.1). When respondents attempted authorship attribution, they were wrong almost 90% of the time 9 (p.443).

Comments participants used to explain how they attributed authorship:
"The person uses many words not normally used by others", "recognize some people's English or lack thereof", "how people express themselves", "strong opinion that serves their area".

This study provided empirical support for two theories of interest for the communication discipline. First, attribution theory examines the conclusions people reach about their own and other people's characteristics and the effects of these conclusions on future judgments and choices. Essentially, this theory poses that we look for cues to understand others. Second, social cues theory stress that we understand much of our environment by analyzing cues such as dress, tone, and body language. Recently, researchers have attempted to understand whether we can pick up social cues in virtual environments. This study provides support that indicates that we do look for cues in virtual environments. However, when people are anonymous chances are that the cues wrongfully interpreted because we attribute them to the wrong people. It seems obvious that that for these reasons the facilitator should run anonymous meeting with great care. Clearly, this finding has some serious implications for future uses of groupware. We cannot assume that virtual communication that is social anonymous. Furthermore, this study demonstrates that people interpret the social cues that are available to them.

Paraphrased from Hayne & Rice (1997)

Should I run anonymous meetings or not?

Whether to take advantage of anonymity or not is a judgment call. You must evaluate in each case whether you think it's useful for the group.

- If the group can stick to task, then it is an advantage because more honest ideas can be generated. Chances are that such groups will discuss task issues quite intensely -- something that can result higher quality work.
- When asking participants to reflect on what the "real" issue or problem is, anonymity can work to the advantage of the group because they are likely to open up faster. The sooner you get a gist of what the issues are, the bigger your chances of success are.
- In groups dealing with emotional issues anonymity is at the risk of people seizing the opportunity to "vent" and possibly act out of line. You should monitor such groups closely and stop the sessions if comments are inappropriate or attack specific people.
- In groups where it does not seem like the meeting would be anonymous, it might be best to explain the notion of relative anonymity and suggest that people include their initials with comments.

What should I do about people that are acting out of line because they got the chance when being anonymous?

- Express the rules of the meeting and your expectations before the meeting. Be sure to make clear that acting out of line is not acceptable. For example, explain that negative comments must be related to an issue, preferably a task issue, and not to a person.

You regulate the process of the meeting in the cybersetting just as you do in the traditional setting. Thus, you should monitor the anonymous session in order to look for inappropriate comments. If participants are not to the point and attack each other, stop the session and explain why. During a traditional meeting it is the facilitators right to leave the room if participants do not follow the rules of the meeting. So, if warnings do not help --"leave" by logging out and explain why.

Recording in the cybermeeting

In a traditional meeting, the facilitator often has a recorder who writes down the group's input created during a meeting. The recorder creates both a short- and long-term memory for the group. The recorder will often stand easily visible in front of participants and write down comments on a flip chart, a blackboard, etc. Looking at what the recorder writes makes it easier for participants to know what is being said in the meeting. Thus, the recorder provides the group with a short-term memory. A skillful recorder will not disturb the flow of a meeting (see Kraner 1996; Doyle & Strauss, 1976). These notes also serve as the group's long-term memory because they can be retrieved later. Like the facilitator, the recorder is a neutral servant of the group, so she should be sure not to alter the meaning of the information she writes down.

When using electronic media, the groupware tool records for you. Everything participants write down is saved and can be printed out as reports. These reports are ready to be given to participants soon after the meeting. A recorder does not need to record during the meeting to ensure the group "remember" what was said in the meeting (Nunamaker et.al., 1991). Undoubtedly, electronic recording makes the recording and information sharing easier. For example, Creigton & Adams (1998) explains how what was said in an important board-meeting was made available to everyone in the organization immediately after the meeting via the Intranet.

Pitfalls of automatic recording

Automatic recording does have some pitfalls. It can be hard for participants to be on the same page during the meeting because the meeting notes are on many different screens. This can interfere with the group's short-term memory. Unless someone takes the job of summarizing, it is hard for participants to know exactly what the key-points are. The danger is that participants leave with differing opinions of what really happened during the meeting. The facilitator/recorder should ensure that the group always on the same page. For example, the facilitator can occasionally provide a summary of key issues in the meeting. When doing this the facilitator can also ask the group if important items are missing. The group may then take a break from what the are doing and meet as a whole group. The task of recording is also made difficult because participants are not in the same location. For example, it is harder for the facilitator to know whether participants agree with the things she writes up during or after the meeting. Information overload can be another challenge. During and after the meeting, the "everything you say is written down approach" can soon represent too much information. It is likely that most people will not read meeting-minutes 20-30 pages (or more) length. Thus, the recorder must take the job of organizing this longer document into a more concise one. The final notes should be distributed to participants for comments prior to the next meeting. This is also important because the recorder should not change the meaning of what was said in the meeting. The only way to ensure that this did not happen is to ask the group.

Summary of challenges of recording in the cybersetting

These challenges were discussed in the section above – Recording by "default" in the cybermeeting: the process is mine and the content is yours, but

Automatic recording makes information sharing and retaining group memory much easier but there are some drawbacks -- these are most evident during the meeting.

- It can be hard for group members to get the big picture because there is no one screen that shows a summary of issues. In other words, the group looses part of its short-term memory.

- The "everything you say is recorded approach" most groupware have can soon represent too much information for group members to process. It is fairly common that meeting notes are 20-30 pages or longer.

What can I do to make it easier for participants?

- During the meeting: provide summaries of the output the group creates. Ask participants whether they think other items should be included in the summary.

- After the meeting: make sure that the meeting notes are organized and that a brief summary is written. Distribute this list to all participants. Offer to send the original document to those who are interested.

Recommended readings:

Chen et.al.(1994). Automatic concept classification of text from electronic meetings Communications of the ACM, 37:56-74.

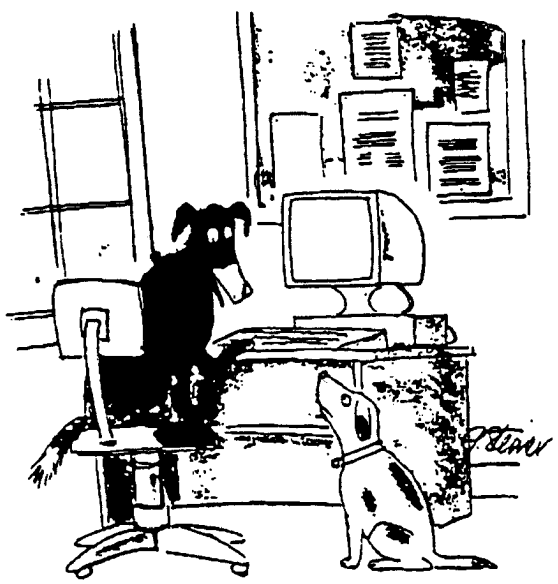
Creighton, J. & Adams, W.R. (1998). Cyber meeting. How to link people and technology in your organization. New York, Amacom.

Dennis, A. & Valacich, J. (1993). Group, sub-group, and nominal group idea generation: new rules for a new media?Journal of management, 20:723-736.

These readings provide good insight to aspects of the communication process that are different when communicating via electronic media. These articles, however, are only some of many similar articles that were published during the early 90's.

CHAPTER SEVEN
SOCIAL CUES AND CMC MEDIA – TOWARDS A NEW PERSPECTIVE

Concurrency of media, anonymity, and default recording are important differences between the way we communicate in the traditional setting and the way we communicate in the cybersetting. However, the most important difference between the two is that communication is mediated via technologies in the cybersetting. Because of this there is less opportunity for face-to-face communication. This means that the ways in which we pick up social cues from each other during cybermeetings are different from the way we do when we are meeting face-to-face. In traditional settings, we can interpret a wide range of cues such as tone of voice, body movements, clothing, and facial expressions. We can also share knowledge of the setting when meeting face-to-face. On the contrary, in the cybersetting, communication can be limited to exchange of documents and typed comments. In these situations, communication may be more of a challenge. However, as I will argue, there are ways of overcoming this obstacle, primarily because it is possible to interpret social cues via technologies.



"On the Internet, nobody knows you're a dog."

Figure 1: Drawing by P. Steiner (© 1993, The New Yorker Magazine, Inc.).

In this chapter I will discuss several aspects regarding the restricted possibilities of face-to-face communication in the cybersetting. Important findings from research that challenge common assumptions about the absence of direct communication can help the facilitator encourage more sound uses of technologies will be discussed. First, I present evidence from research that indicates that social cues are transferred via electronic media. It might seem obvious that communication cannot be really interpersonal when little face-to-face communication occur. However, the evidence that supports that social cues are communicated via electronic media makes it harder to argue that communication in the cybersetting can not be interpersonal, because when we use the term interpersonal communication we often mean interpretation of others. Next, I argue that the facilitator can have an effective presence in the cybersetting. That is, the facilitator can interpret social cues via technologies. I offer advice for how the facilitator can work to read interpersonal cues before, during, and after meeting sessions. Furthermore, I recommend a mixed use of media as one way of overcoming the lack of face-to-face contact obstacle. Lastly, I warn the facilitator against wrongfully attributing problems with the facilitation to the lack of face-to-face communication when other problems might be the real issue.

A debate in the literature – CMC an impersonal media?

CMC, because of its lack of audio or video cues, will be perceived as impersonal and lacking of normative reinforcement, so there will be less socioemotional content exchanged.
(Rice & Love, 1987, in Walther, 1996)

Researchers do not agree as to whether communication via electronic media is interpersonal. A large body of research called "the cues filtered out approach" has investigated the differences between face-to-face communication and CMC communication. A majority of these studies have focused on groups. The understanding of this research is that CMC leads to little communication of social cues because there are

very limited opportunities for exchange of non-verbal communication (Walther, 1996). The hindrance of being able to communicate social context we are a part of via an electronic media is also of importance (Walther, 1996). As the ability to communicate a social presence declines, communication gets impersonal (Hiltz, Johnson & Turoff, 1986; Rice, 1984; Steinfield 1986, as cited in Walther 1996).

More recently other researchers have provided evidence that contradicts with the above perspective. For example, Walther, Anderson, & Park (1994) found that groups using electronic media actually become personal, but it takes longer. Furthermore, people will get devoted to social exchanges when the task is closer to completion. Walther et al (1994) suggests that prior research has failed to understand this because studies were restricted to groups in the initial face of the group's life. Additionally, results of many other empirically based studies conflict with the assumption that CMC is impersonal. For example, friendship and romances on the Internet complicates the notion of the Internet as an impersonal media (see Reid, 1991, as cited in Walther, 1996). A recent study indicates that interactive messages on the Internet can be compared to conversations. The study is a first attempt to look at interactivity on the Internet as a "glue" that keeps groups together. Messages were found to be playful and social (Rafelaeli & Suudweeks, 1998). The emergence of "Muds", social communities on the Web, indicate that people socialize on the Internet (Doyle & Hayes-Roth, as cited in Sudaweeks, 1998; Rheningold, 1994). The message from the aforemetioned studies is that somehow people seem to derive the social cues from CMC. How they do so remains a question that researchers have only started to investigate.

Summary of the question of whether social cues can be exchanged via the Internet

- "The cues filtered out" perspective posits that social cues are not exchanged because there are limited opportunity for exchange of non-verbal communication and context variables, such as situations and relationships, via electronic media.
- The findings of other research contradict with the above perspective. For example, Walther (1996) found that virtual groups were social, but it takes longer before they are social -- compared to traditional groups. He also found that social exchanges are more frequent in cybergroups as the task get closer to completion.
- Some authors point out that the "social life" on the Internet, for example chats where people fall in love and/or make friends, conflicts with the assumption that the Internet is impersonal.

Some interesting comments from researchers

"Network and Netplay represents a significant implication of CMC and online networks. That is, these (and other) reports were conducted by groups of researchers, across the globe, communicating through the very systems they were studying. The data were collected, organized, coded, and co-authored through the Internet. As Hiltz and Turoff, Lievrouw and Charley, and many others have suggested, the very nature of invisible colleges and scientific communication is being transformed through CMC and communication networks. It is clear from discussion with the authors of Network and Netplay that such capabilities have both positive and negative aspects. It's equally clear that people can engage in both work and play, using the Internet and other networks."

(Rice, 1998, foreword in Network and Netplay)

"I routinely meet people and get to know them months or years before I see them - one of the many ways my world today is a different world, with different friends and different concerns, from the world I experienced in premodem days. The places I visit in my mind, and the people I communicate with from one moment to the next, are entirely different from the content of my thoughts or the state of my circle of friends before I started dabbling in virtual communities. One minute I'm involved in the minutiae of locals mattes such as planning next weeks brigdegame, and the next minute I'm part of a debate ranging in seven countries. Not only do I inhabit my virtual communities, to the degree that I carry around the conversations in my head and begin to mix them up with my real life. I've been colonized, my sense of family at the most fundamental level has been virtualized."

(Rheingold, 1994, p. 10).

Critique of research on social cues and electronic media from the facilitator's perspective

In theoretical terms, the above discussion is extremely interesting because it represent a change in the way we think about communication via technologies. However, from the facilitator's point of view there are several practical issues the research could have addressed in more depth. I will mention a few of these. To begin, only on rare occasions does the facilitator work with groups in which the members know nothing of each other' background. First, a good facilitator will ensure that an appropriate "get to know each other activity" gets accomplished. For example, group members can exchange brief biographies. Second, it is likely that the group members share a background such as belonging to the same industry or having similar type jobs. For example, chances are that teachers that have never met can relate to each others job, because the challenges of teaching are similar. Other times, people understand what kind of environment the other group members work in because they have knowledge of the company, such as when companies that have cooperated before to create cross-organizational teams. Overall, the odds are that people understand the particular context their fellow group members work in as well as the kind of professionals they are. Furthermore, the typical member of cross-organizational teams is a trained professional that makes her living by working in such teams. Thus, she is probably motivated to work hard, even if the communication might be less personal. In fact, she might know quite a bit about how to make such more communication personal. Likewise, people are increasingly getting used to working in teams as well as communicating via electronic media. Many professionals agree that a professional etiquette providing guidelines for behaviors in the cybersetting is developing, something that ease communication in such

settings. Think, for example, about the many norms that guide appropriate writing of email in professional settings. Most importantly, it is rare that group members restrict themselves to work together via electronic media only. In most cases people will call each other if they feel it is necessary to do so. Other times, a variety of media is used to mediate communication, for example: phone, video-conferencing, or groupware are used at the same time -- depending on the needs of the group (see Simons, 1998, cited on page 80 in this chaper). In short, people typically have some prior knowledge about each other and they communicate via more than one medium, therefore, they have a basis that makes it easier to interpret social cues via electronic media. Finally, the facilitator should remember that it might not be necessary or desired by group members to share social cues. In some groups, it might be sufficient to communicate about task matters only. For example, engineers working on highly specific tasks that require years of experience might think it is fine to not know their fellow group members. In these cases, communication with less social cues can be advantageous for the group.

Towards interpersonal communication in cybergroups

As I emphasized in Chapter Two and Chapter Three the facilitator can assist groups utilizing groupware because the facilitator can take care of both technology- and group issues. This allows the group to more easily concentrate on work tasks. In order to deal with group dynamics, it is crucial that the facilitator can interpret a myriad of behaviors in the group and be able to interpret these in order to decide what will be the most appropriate step to take next. In the upcoming section, I will argue that the cybersetting allows the facilitator to interpret behaviors in the group, although it can seem hard to do this.

In the traditional setting, the facilitator interprets spoken language and non-verbal communication throughout meetings in order to move the process forward. A wide range of techniques can be used to do this. Paraphrasing is one of these techniques. During paraphrasing, the facilitator reformulates foggy statements to ensure that everyone understood what was said. Summarizing key points is another technique that ensures that everyone is on the same page. Other times, the facilitator has to deal with conflict during meetings. When groups encounter conflicts, a good facilitator should know how to handle this in advance. For example, the facilitator might have expected that the group would start arguing when meeting as a whole group. If this happens, the facilitator can, as planned, ask the group to work in smaller groups, individually, or take a break.

All of these techniques, and many others, assist the facilitator in having a guiding presence and position of control in the group. I will now offer some suggestions for how facilitators can exercise similar practices in the cybersetting that will work to increase the facilitator's presence. This advice should help to avoid a meeting with too much of an electronic feel as well as give the facilitator a chance to interpret social cues from group members that will help her remain in control of the group. They will also help to illustrate sound uses of technologies in terms of improving communication among meeting participants.

Combined used of media – a more interpersonal setting

> Conferencing tools (especially videoconferencing tools) do address some of the important cues in communication.
> (Markowitz, 1997, p.3)

One important step the facilitator can take to avoid a meeting with an overly electronic feel is to use several media at the same time. This is common practice for facilitators (see Markowitz, 1997; Simons, 1998). Combining media will also make

interpretation of social cues easier because it allows for interpretation of non-verbal body language, something that can make the interaction more interpersonal. This is even more important in groups were groupware and other CMC idea is the primary way of communicating – only allowing for written messages can kill motivation fast. Use of phone- and videoconferencing tools in conjunction with groupware is one method that has proven successful for groups. Combining these media allow the group to share more informal comments by talking and at the same time they can share documents and ideas via a groupware tool. Use of video conferencing tools is a good substitute for face-to-face interaction. In other words, use of voice- and video technologies will allow the group to make up for some of the interpretation of social cues that is lost when not meeting face-to-face. Clearly, combined use of media is of great advantage to the facilitator, not only the group members. It makes it much easier for the facilitator to interpret cues. The need for the facilitator to be prepared is a good enough reason to take on the extra work that comes with using more media, even if the group members might not think it is necessary.

Summary of combined use of media – increasing the level of interpersonal communication

- Combined use of media is an advantage because it allows for interpretation of a wider range of cues than communication that is restricted to use of groupware does.
- Videoconferencing tools can somewhat substitute for the lack of "real" face-to-face communication in cybermeetings.
- Use of phone allows for instant verbal communication.
- Groupware allow for very clear communication of text such as reports and written comments – something that can help the group members with making more precise statements.

Verbal and visual media used in combination - a success story

An experienced GroupSystems facilitator explains how the team at the Ventana Corporation* have meetings using GroupSystems combined with other media. People in the organization are scattered in different time zones, so it is necessary to have distributed meetings. Over time they have developed routines that have proven to successful. For example, for the 8am Monday meeting, they are using GroupSystems as well as voice- conferencing and phone. This allow the group to share documents and other written communication via the groupware as well as to discuss these documents and other issues via the voice media.

Additionally, the group has good routines for the meeting. This further helps to increase the level of interpersonal communication in the group, despite having a distributed meeting.

In advance of the meeting people are invited to the meeting electronically. Upon acceptance, participants are brought into a "electronic branch outline". Their name is entered on the this branch, and they add their pending items for the meeting on the branch with their name. This outlines serves as a major way of organizing the meeting. This group stresses that the facilitator running the meeting is important, because she invites people, set up the initial outline for the agenda, and sets up the agenda for the "real" meeting.

Simons note: "While many teams are self-guiding, a facilitator is key to a successful distributed meeting or project. The facilitator is the one to manage the group dynamics and processes." During distributed utilizing a number of media, it is particularly important that someone steers the process of the meeting (Simons, 1998).

***Ventana Corporation is the company behind the groupware software GroupSystems. Today the company is called GroupSystems (see www.groupsystems.com).**

Written communication and the interpretation of social cues

In this section I will explain that in order to get a sense of dynamics in the group, the facilitator can learn to read cues present in typed input comments from group members (most groupware require that people write comments and post them so everyone can read them). This way an on-line meeting can be monitored just like a face-to-face meeting. For example, during brainstorming sessions the facilitator can work on summarizing ideas while the group is busy thinking. The facilitator can then present this list to group. This enables the group to know what is accomplished and it will give the facilitator a clear picture as to how well the group is actually working. Similarly, the facilitator should be sure to continuously read the input from the group throughout

sessions regardless of which activity the group is working with. If repeated ideas, cruel comments, and "goofing off" comments are evident, the facilitator should act on this. Overall, "listening to text" can provide valuable clues that the facilitator can act upon.

The importance of the time before and after the meeting

The facilitator must work to involve the group in the group's progress in order to maintain the motivation in the group. The agenda should always be sent out in advance in order for the group to offer feedback and add to it. This will help to ensure that issues are being discussed at the meeting and that group members feel involved. The meeting should start with some informal updates on "what's going on" to substitute the typical conversation in the hallway. The recorded notes from the meeting should be sent out to the group soon after the meeting so that everyone gets a clear idea of what was accomplished. The group can get "homework" for the next meeting. For example, they can review all the ideas that came up during brainstorming and start thinking about which ones should be worked more on in the upcoming meeting. These are just some of the many behaviors the facilitator can enact to ensure that the group is involved in the process. Such behaviors serve as constant reminder of the project, something that will work to ensure that group members actually do their job (see Kostner, 1996). Such continuous contact also serves to strengthen the facilitator's presence in the group.

For projects that will be going on for a long time where group members will be in different locations, trained facilitators rarely run electronic meetings without arranging for group members to meet at least once in person so that they can better understand each other (see GroupSystems Manual, 1998; Kostner, 1996; Markowitz, 1997). Arranging for group members to meet helps, especially in the long run, because knowing the other

group members makes it much easier to communicate at a more intimate level. Working to get people to know each other and the facilitator will not only increase the facilitator's presence but also each group member's presence.

You can learn to "listen" to written communication

One way of seeking to understand social cues in a virtual group is to listen to written communication. To do this you can pay attention to areas such as:

- The amount of output the group makes during the meeting, some groupware have functions for this, e.g. the amount of comments the group make are counted. This tells you whether the group is productive or not. However, keep in mind that a large number of comments do not guarantee that the group is doing good work. Therefore, be sure to read a sample of the comments and assess the quality. You can ask for help do this from a person in the organization such as a manger.
- Looking for goofing off statements and statements that are cruel during sessions, is another way of getting a feel of the emotional climate in the group. When comments are out of line you should discuss the issue with group members, just as you would in a traditional meeting.
- You can also look at the progress of tasks that are to be done between meetings, such as the writing of documents, to get a feel of how important the group's work is to the participants. A low level of participation can indicate the people do not really care.

Involving the group outside of the meeting:

- Make sure the agenda is distributed in advance and that all group members get an opportunity to give feedback on it.
- Send out "what's going on" updates on a regular basis -- this can be done via email.
- Call group members on a regular basis to "chat" -- invaluable insight can be obtained this way.
- Give the group homework for the next meeting, e.g. think about which ideas from the brainstorming session are ideas that should be carried out. This helps people remember that the project need work often, plus people tend to work harder when they expect that they have to report on progress.
- Make sure that group members meet in person on regular basis on projects that has a long time frame. It is especially important that such teams meet at least once in person ahead of the "real" meeting if the group members do not know each other in advance.
- Overall, be sure to do your part to motivate group members. If you suspect that motivation is lacking -- ask them why. Remember that lack of motivation is common in virtual teams, the advice above provides a great start to avoid this. Many researchers think that lack of a presence is one very important contributor to the death of virtual team. Thus, be sure to work with group members to enhance the feeling of a social presence in the group.

For more ideas – see The GroupSystems concept guide, Workgroup edition 2.0, 1990-1998, Ventana Corporation.

Problems with the facilitation – not only an issue of lack of face-to-face communication

It can be tempting to attribute problems with the facilitation to lack of face-to-face contact. I have often heard people in the IT industry make comment such as "meeting technologies are difficult, the lack of face-to-face contact makes it hard." There are, however, many other common problems that might be the real issue. Here, I will only mention some to make a point, as many of the issues presented here have been discussed in earlier chapters. Wallance (1997), an experienced groupware developer and re-engineering participant for groupware projects, points out that groupware is not a one fit technology. Some organizations are not right for groupware. Companies that want to become more productive putting groupware to work should have a culture that promotes shared efforts and cooperation. Self-right and competition will soon kill a technology that is intended to support groups working together. Wallance further points out that the implementation of the groupware is a crucial phase. There are numerous things that can go wrong. Consultants, she argues, should be used with care, there are just so many inner workings of the company that can interfere that people from the company should participate in the process of integrating the software. She also points out how important it is to have adequate support of the technologies –the system must be up and working. Then, it is the issue of acceptance, the management must be supportive of the technology. Her findings are much similar to those of other researchers such as Ron Rice and Wanda Orikowski that were presented in Chapter Three, Four and Five. These authors also points to the importance of a supportive management, cultural variables, and the way the implementation stage is managed – just to mention a few findings of their research.

Another crucial aspect deserves attention here. The technology the user for asked may be very different from what they actually get. In other words, the groupware the facilitator presents to a group might be quite different from what the group thought they would get based on what they asked for. It is important to express clearly to groups what a groupware can actually do, in order to avoid unrealistic expectations.

It is important to remember that the introduction of groupware in organization is challenging. The evidence in research and on the experience of professional consultants suggest that there are many things can go wrong. For example, social norms in the organization might stay in the way of successful use of groupware. Commonly, this happens when individual contributions are rewarded. What is clear from the research I briefly presented above, is that one should be careful with attributing lack of success to the limited opportunities in the cybersetting. Certainly, this can be a challenge. However, it can also easily overshadow other more important problems that stand in the way for successful use of groupware.

Recommended readings on social cues and electronic media:

These readings all share the characteristic that they offer untraditional perspectives on communication via CMC media.

Flaherty, L.M., Pearce. K.J., Rubin, R.B. (1998). Internet and face-to-face communication: not functional alternatives, Communication quarterly, 46, 3:250-268.

This article make the point that face-to-face and CMC communication tend to happen in conjunction with oneanother. So, in a practical sense it can be meaningless to assess them as alternatives.

Rheingold, H. (1994). The virtual community : homesteading on the electronic frontier, Addison-Wesley: CO.

Rheingold's rich descriptions of social life in cyberspace make it hard to argue that such interactions cannot be personal. This book created waves when it came out in the early 90ies.

Grudin, J. Eight challenges for developers, Communications of the ACM, 34,1:93-105.

Wallance, M. (1997). If you build it, they may not come, IEEE transactions on professional communication, 40,1: 48-53.

Mandviwalla, M. & Olfman, L. (1994). What do groups need? A proposed set of generic groupware requirements, ACM Transactions on Computer-Human Interaction, 1,3:245-268.

These readings all point to common challenges of groupware developers and consultants. Together, they make one important point clear. Lack of success with groupware products in many organizations is rooted in more than just less face-to-face communication.

CHAPTER 8

CONCLUSIONS AND IMPLICATIONS

The findings that are presented in this guidebook extend our knowledge in two important areas. First, aspects of the role of the facilitator practicing in the cybersetting are described throughout the paper. It is important to work to provide a definition of this role, because cyberfacilitation is an emerging practice. There is much confusion about what such facilitators actually do. Second, this guidebook has emphasized the importance of the post-implementation stages, especially in Chapter Four and Five. This is important because research suggest that much of the success of CMC media depends on how users are being followed-up by a communication professional. It cannot be assumed that productive uses result without considerable effort from the users and the facilitator. This is especially important when utilizing groupware technologies, because such technologies substitute for traditional ways of communicating. To develop new ways of communicating that are satisfactory will take time. Now, I will turn to reflect further on the role of the facilitator and the importance of the follow-up stages. Another important contribution of this guidebook is the linking of literature. Relevant research on use of CMC in organizations has been linked with the area of facilitation throughout this guidebook. Please see the Appendix for further information about this.

Defining the role of facilitators practicing in the cybersetting

The role of professional facilitators practicing in the cybersetting is emerging as I write. The research that is linked with facilitation in this guidebook contributes to develop a perspective for this practice. I believe that communication scholars should

contribute to defining this role, because facilitation springs from the field of communication studies. By taking advice from the literature in the communication discipline and applying it to facilitation, I have developed a perspective of the role of facilitators in the cybersetting. I hope readers of this guidebook are as fascinated as I am by the vast knowledge communication studies reveals on use of technologies in organizations.

A major challenge for the facilitator in the cybersetting is to not only have knowledge about communication processes but also how to link communication needs with technological solutions. Having knowledge of use of technologies will help the facilitator to join the best of group processes with the best of technologies. This is a truly challenging task. After writing this guidebook I suggest that utilizing technologies the "best" way not only requires knowing characteristics of the technology, such as the option of anonymity. It also requires that the facilitator have solid knowledge of how people learn to use a technology and what affects the use of it over time. This is especially important when dealing with groupware technologies, because such technologies require users to change the way they communicate. It is possible that so many innovations of groupware do not have good results because this is not acted on. It seems as if successful implementation of such technologies require more work than standard productivity tools, e.g. learning to use Microsoft PowerPoint. The facilitator should remember that it might not be obvious to a new user how a groupware technology can best be utilized. Facilitators should also keep in mind that users must agree with how the technology will change the way they communicate. Otherwise, they might feel that the technology is forced upon them and resist using it.

Furthermore, when working with clients the facilitator should remember that users will pick up way of using the technology from the facilitator. In this sense, the facilitator is socializing users into sound uses. It is clear that the role of facilitators in the cybersetting is challenging. However, with sensitivity to human communication processes, knowledge of organizations as well as an awareness of the use of technologies and the characteristics of them, the facilitator should increase the chances of productive uses of groupware.

The importance of the post-implementation stage and follow-up training

Technology innovations often fail. To avoid this, it is important that facilitators emphasize the post-implementation stage. It should not be expected that the accommodation of the technology to the specific environment to which it is adopted will take place when the technology enters the organization. Research on social uses of technology strongly supports this claim. This is even more important with groupware because these technologies can be used in so many ways. With these technologies it make more sense to ask how the user would like to best utilize the technology than ask how it is designed to be used. To identify these best uses can take a long time. The facilitator should inform users of this and warn them against expecting results too soon. The best uses will evolve over time.

Do identify the best uses, it is likely that the facilitator must work closely with the users. People will most likely need considerable support in the process of developing productive uses. In order to provide users with this assistance, facilitators should consider follow-up training. This follow-up training must extend explanation of the "ins and outs" of the technology. It is more important that such training has a

seminar format where users are expected to suggest how they can se the technology being used. For example, users can meet to discuss how they can see the technology being used after having tested it for a few weeks. Facilitators should strongly encourage their clients to take this approach in order to ensure success, even if it is more costly. In the long run, it is likely that it will save the client many frustrations. It is important that the facilitator does not give clients false hopes. Ensuring successful implementation of groupware have proven to be a hard task. Organizations should not attempt to take advantage of this technology, unless they are willing to put some real effort into it.

APPENDIX
LINKING OF CMC LITERATURE WITH FACILITATION

An important contribution of this guidebook is the linking of literature. Relevant research on use of CMC in organizations has been linked with the area of facilitation throughout this guidebook. Much of this research has not been linked with facilitation before now. For example, it is new to link the concept of reinvention with facilitation in the cybersetting. Likewise, it is new to link network theory with the activity of facilitation. Joining literature is important because we often think that we do not know much about communication in the cybersetting. The findings of research that are presented in this guidebook challenge this assumption. They demonstrate that we should conduct a throughout investigation of the knowledge we have, before we jump to the conclusion that we lack the desired knowledge. My hope is that my approach will inspire facilitators who read this guidebook to think about how use what they already know. Three areas of literature have been linked with facilitation in this guidebook. These areas include: research on organizational forms, social uses of technology and differences with the communication process in the cybersetting. By having insight into these areas the facilitator increases the chances of a successful technological innovation in the organizations they work with.

Research on new organizational forms and network theory was presented in Part One of this guidebook (see Chapter Three). It is important for facilitators to have insight to this perspective because it builds understanding of the way today's organizations work and the environment they provide for the people that work in them. These theories also describe well how organizations today can be seen as units of relationships between people. In other words, the structure of the organization is

the relationships it consists of. These relationships are increasingly mediated via CMC media. The latter is important for the facilitators to have insight into because they help people build relationships via CMC media. Facilitators must be aware that their advice may affect the way build relationship and in turn the organization. This is clearly a very important responsibility of facilitators. It is possible that technical innovations have failed because facilitators have not had knowledge of how strongly their advice can affect the organizations. Thus, facilitators should do their best to understand how the organization is built and advice accordingly.

Second, research on social use of technology was presented (see Chapter Four and Five). To have knowledge of social uses of technologies is extremely helpful for the facilitator because it enhances the understanding of the many factors that affect the actual use of a technology. For example, it is important for the facilitator to pay attention to culture in the organization. As I emphasized in Chapter Four, if the environment does not encourage experimentation with the technology, it is not likely that users will develop ways of using the technology that are more productive than existing ones. The facilitator, thus, must work hard to promote an environment in which productive uses will grow. To do this, the facilitator must observe the environment in the organization. If inefficient behaviors are found, the facilitator must act on it. One example of such behaviors is the reward of individual work and not group efforts. If groups are not rewarded, collaboration is not rewarded, and then collaborative technologies cannot be expected to serve their purpose. Another aspect of social uses that is essential that the facilitator has knowledge of is technology-mediation (see Chapter Five). This concept helps the facilitator to understand how

important it is to for people to have someone to guide their use of a technology. Facilitators can take this role and work to steer users towards productive uses. In this sense, the facilitator takes on the role of a socializer. It may be a good idea for the facilitator to visit with clients without having a set agenda aside from talking with the user about how the technology is working for them. Doing this, the facilitator will learn the user ways of using the technology.

Third, it is important for the facilitator to have knowledge of the differences between the communication process in the traditional setting and in the cybersetting. This research is often more focused on running meetings than the research I mentioned above. Thus, it is obvious that it can be linked with facilitation. For example, researchers have investigated whether it is advantageous for groups to be anonymous during meetings. These findings are a must for the facilitators using groupware to have insight to (see Chapter Six). A related area of research that facilitators benefit from is the discussion of whether social cues are transferred via CMC media (see Chapter Seven). Facilitators should know that researchers do not agree. Today, many researchers believe that social cues are transferred via CMC media, although it has been a belief that this was not the case in the past. Furthermore, it is important that the facilitator have insight into how one can increase the chances of transferring social cues via CMC media. For example, combining use of media has been found to help, because users can interpret a wider range of cues, e.g. when videoconferencing- and groupware tools used at the same time allow people to interpret visual communication and written communication at the same time.

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